clarion

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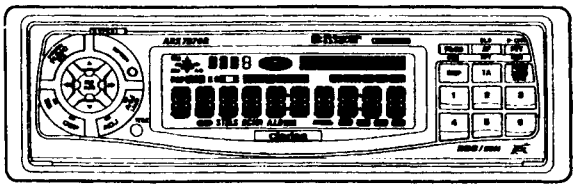
Service Manual



ARX7370R

RDS-EON/FM-MPX/MW/LW Radio Cassette Combination With CD Changer Control

Model ARX7370R
(PE-1542E-A/Black panel)

Model ARX7370RW
(PE-1542E-B/Grained panel)

■SPECIFICATIONS

Radio section

Tuning system: PLL synthesizer tuner
Receiving frequencies:
FM 87.5MHz to 108MHz
MW 531kHz to 1,602kHz
LW 153kHz to 279kHz

Tape deck section

Cassette type: Compact audio cassette
Wow & flutter: 0.06%(WRMS)
Frequency response: 20Hz to 20kHz(Metal)
Signal to noise ratio: Metal:58dB
Dolby B NR:67dB
Dolby C NR:74dB

General

Max.power output: 4×35W
Power supply voltage: 14V DC(10.8 to 15.6V allowable), negative ground
Power consumption: Less than 10A
Speaker impedance: 4Ω(4Ω to 8Ω allowable)
Auto antenna rated current:
500mA or less
Weight
Main unit: 1.6kg
Remote control unit: 20g(including battery)

Dimensions
Main unit: 178(W)×50(H)×152(D)mm
Remote control unit: 40(W)×6.5(H)×86(D)mm

※ Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
※ "DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
※ Specifications and design are subject to change without notice for further improvement.

■COMPONENTS

PE-1542E-A / PE-1542E-B

Main unit	————	1
Remote controller	RCB-114-3300	1
Battery(CR2025BC)	————	1
Universal mounting bracket	300-9617-0000	1
DCP case	335-5311-0000	1
Outer escutcheon		
(ARX7370R)	370-5618-0001	1
(ARX7370RW)	370-5618-0002	1
Parts bag	————	
Hook plate	331-0418-0000	2
Cord clamp	335-0813-0001	1
Rubber cap	345-3613-0001	1
Screw	716-0716-0001	1
A-lead(for cellular phone)	850-6611-0000	1

■To engineers in charge of repair or inspection of our products.

Before repair or inspection,make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage.Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable.The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.
   For proper circuit construction,use of insulation tubes,bonding,gaps to PWB,etc,is involved.The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts.Ensure that they are placed back in their original positions after repair or inspection.
   If extended damage is caused due to negligence during repair,the legal responsibility shall be with the repairing company.
3. Check for safety after repair.
   Check that the screws,parts and wires are put back securely in their original position after repair.Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots.
   If extended damage is caused due to negligence of repair,the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.
   Disconnect the battery terminal after turning the ignition key off.If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur.If extensive damage is caused due to negligence of repair,the legal responsibility shall be with the repairing company.
5. Cautions regarding chips.
   Do not reuse removed chips even when no abnormality is observed in their appearance.Always replace them with new ones.(The chip parts include resistors,capacitors,diodes,transistors,etc).The negative pole of tantalum capacitors is highly susceptible to heat,so use special care when replacing them and check the operation afterwards.
6. Cautions in handling flexible PWB
   Before working with a soldering iron,make sure that the iron tip temperature is around 270℃.Take care not to apply the iron tip repeatedly(more than three times)to the same patterns.Also take care not to apply the tip with force.
7. Turn the unit OFF during disassembly and parts replacement.Recheck all work before you apply power to the unit.

■NOTES

1. For VW and Audi vehicles,change the position of fuse installation as shown on the diagram.(Figure 1)

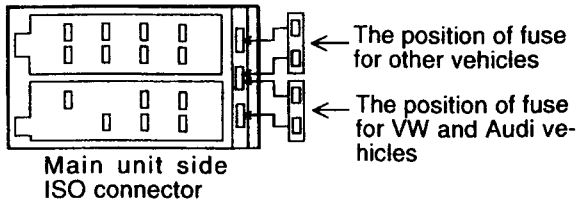
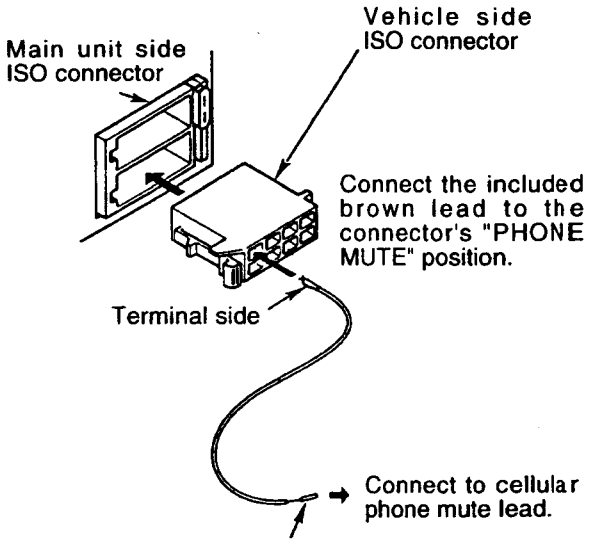


Figure 1

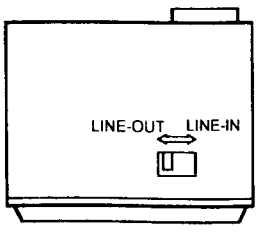
2. The lead include with the unit must be connected to the specified position of the vehicle's ISO connector in order to use the "triggered audio mute for cellular telephones" function.(Figure 2)



Fasten using insulating tape,etc.,to prevent short-circuits at the connection.

Figure 2

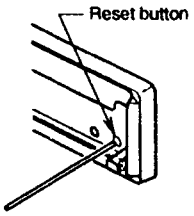
3. The Line IN/OUT switch on the bottom of main unit is intially set to "LINE-OUT".
   When using the internal amplifier and connecting an expanded DSP or equalizer module, set the Line IN/OUT switch to "LINE-IN".(Figure 3)
   For settings,refer to the "Installation/Wire Connection Guide".



Bottom side of main unit

Figure 3

■TROUBLESHOOTING

Problem	Cause	Solution
Power does not turn on. (No sound is produced.)	Fuse is blown.	Replace with a fuse of the same amperage.
	Incorrect wiring.	Wire properly.
Sound quality is poor.	Playback head is dirty.	Use a cleaning tape,etc.,to clean the head.
	DOLBY NR button is not pressed.	When listening to a tape recorded with Dolby NR,press the DOLBY NR button and select B NR or C NR.
Nothing happens when buttons are pressed. Display is not accurate.	Microprocessor has malfunctioned due to noise,etc.	Turn off the power,then press the OPEN button and remove the DCP. Press the reset button for about 2 seconds with a thin rod. 
	DCP or main unit connectors are dirty.	Wipe the dirt off with a soft cloth moistened with cleaning alcohol.
DSP or equalizer does not operate.	Micoprocessor has malfunctioned due to noise,etc.	Press Direct button 1 (for more than 2 seconds) while holding in the DSP button,then turn the power back on.

■ERROR DISPLAYS

If an error occurs,one of the following displays is displayed.
Take the measures described below to eliminate the problem.

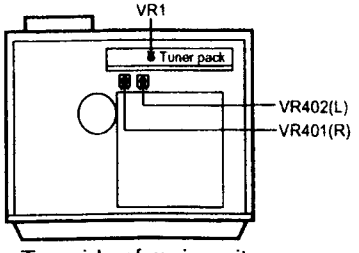
Error Display	Cause	Measure
TAPE ER1	Tape cannot be played due to defective tape such as cut tape.	Eject the tape then replace it with a new one.
TAPE ER2	Tape is caught and cannot be played.	Remove the caught or wound tape.
TAPE ER4	Tape mode cannot be detected.	This is a failure of tape mechanism.
TAPE ER8	Tape is caught and cannot be ejected.	Eliminate the reason for which the tape is caught.
CDCH ER2	A CD inside the CD changer is not loaded.	This is a failure of CD changer's mechanism.
CDCH ER3	A CD inside the CD changer cannot be played due to scratches,etc.	Replace with a non-scratched,non-warped-disc.
CDCH ER6	A CD inside the CD changer cannot be played because it is loaded upside-down.	Eject the disc then reload it properly.
EQ ER99	Communication error between main unit and expanded DSP/EQ.	Connect the expanded DSP/EQ connecting cable securely.

If an error display other than the ones described above appears,press the reset button.

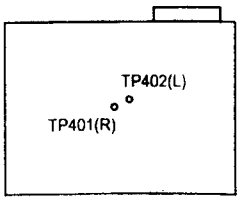
■ADJUSTMENTS

Item	Procedure	Measuring instrument
S-meter	1. Input the 98.1MHz/30dB μ(400Hz-MOD 30%)signal. 2. Turn on the power swtch. and,Press the AF button and CH6 button at the same time.(TEST MODE) 3. Adjust the reading of LCD indicator to [30----00] (3.0V±0.2V) by VR1.	SG
Dolby level	1. Insert a Dolby level test tape(400Hz-200nWb/m),connect the AC-volt meter to TP401(R)/TP402(L). 2. Adjust VR401(R) and VR402(L) to obtain an output of 388mV+1.5/−0.5dB. (Dolby switch:OFF)	AC-volmeter Dolby level tape

Adjustment point

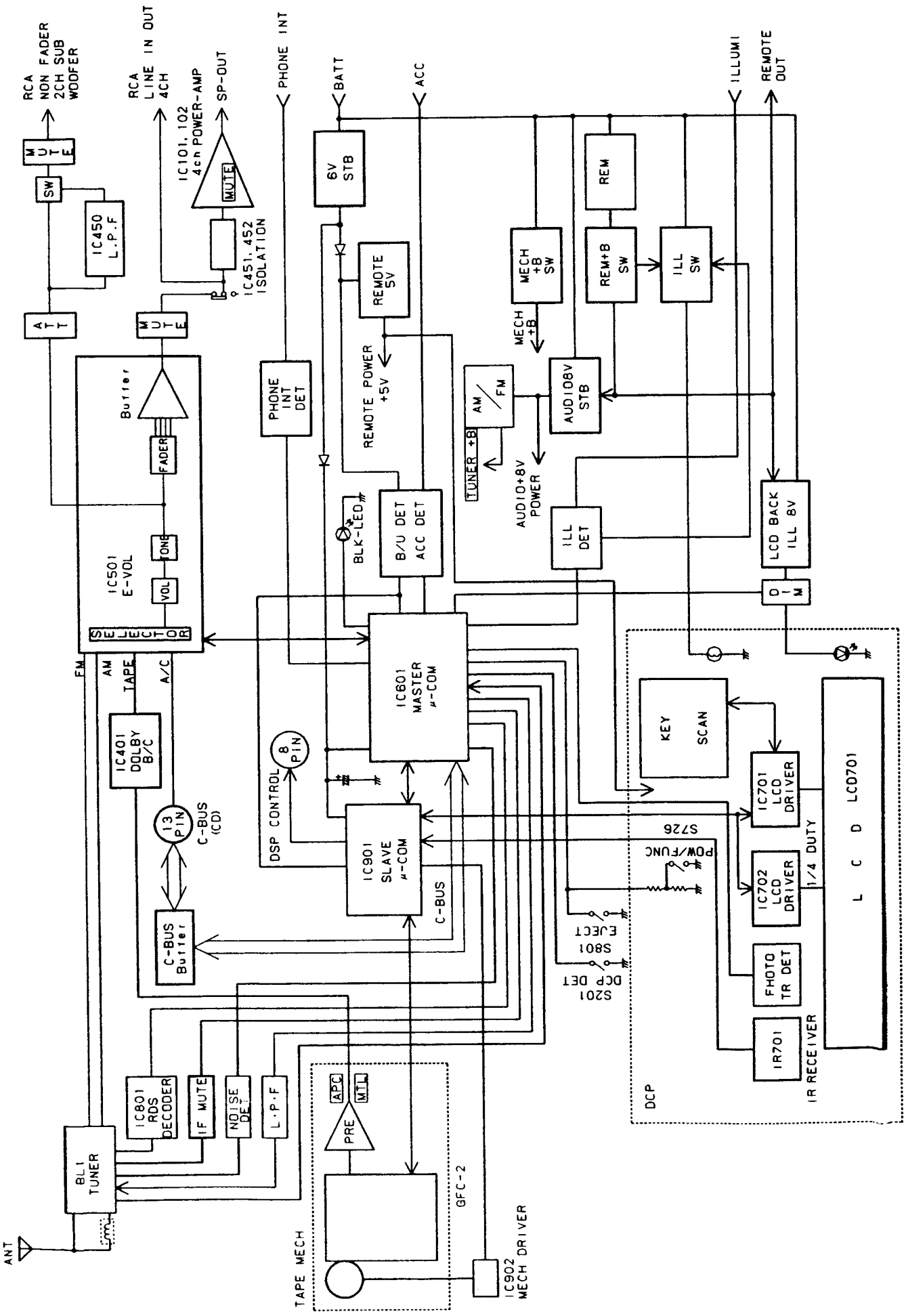


Top side of main unit



Bottom side of main PWB

■BLOCK DIAGRAM



■EXPLANATION OF IC

■μPD78058FGC-044-3B9 052-3330-00 System Controller (Slave micro computer)

Outward Form

80 pins, plastic QFP

Terminal Description

No.	Symbol	I/O	Function
1	N.C.	–	Not in use
2	AUTO CLOSE	I	For "H" : Auto close function available
3	S'/$\overline{A}$	I	For Hi. select type S' where slope console is controlled. For Low, select type A where slope console is not controlled.
4	AVSS	–	GND
5	N.C.	–	Not in use
6	N.C.	–	Not in use
7	AVREF1	I	Standard voltage input for A/D converter
8 9	B.B.RxD B.B.TxD	I O	Communication line with B.B. DSP
10	N.C.	–	Not in use
11 12 13 14	LCD SI LCD SO LCD SCK LCD CE	I O O O	Serial data communication line with LCD drive IC
15 16 17 18 19	MAIN REQ MAIN SI MAIN SO MAIN SCK MAIN BUSY	I I I – O	Serial data communication line with master computer
20 \ 25	N.C.	–	Not in use
26	DCP 5V	O	DCP : Vdd power supply ON signal output terminal
27 \ 30	N.C.	–	Not in use
31 32	SUB W VOL1 SUB W VOL2	O O	Sub woofer level setting signal output pin 31: L L H H pin 32: L H L H ATT(dB): 0 –4 –6 –8
33	VSS	–	GND
34	N.C.	–	Not in use
35	N.C.	–	Not in use
36	$\overline{\text{N-FAD/SBW}}$	O	Non fader/sub woofer switch output terminal Outputs "H" for woofer
37	DOLBY B/C	O	Outputs "L" for Dolby B, "H" for Dolby C
38	DOLBY ON	O	Outputs "H" for Dolby ON
39	$\overline{\text{SLAVE MUTE}}$	O	Outputs "L" when applying mute
40	$\overline{\text{FWD/REV}}$	O	Outputs "L" in forward. Output "H" in reverse
41	METAL ON	O	Outputs "H" in EQ=70μS, outputs "L" in EQ=120μS
42	$\overline{\text{APC DET}}$	I	Inputs "H" in playing unrecorded part
43	APC SENC	O	Sensitivity switching terminal for APC circuit. Switch sensitivity in PLAY or in FF Play mode : Low O/P FF/REW mode : Hi O/P
44	TAPE IN	I	The terminal to detect a cassette pack insertion in EJECT mode. Loading starts when this terminal turns from "L" to "H".
45	REEL PLUSE	I	In PLAY/FF/REW mode, reel rotation pulse signal is input
46 47 48	BIT 2 BIT 1 BIT 3	I I I	Mechanism mode detection input EJECT END (NO TAPE): H H H LOADING (EJECTING): H H L STOP: L H L FWD-FF (REV-REW): L L H FWD-REW (REV-FF): H L L FWD-PLAY: H L H REV-PLAY: L H H

No.	Symbol	I/O	Function
49	METAL SW	I	Metal tape detection input. Input "L" for normal tape.
50 51	P-2 P-1	O O	Motor control output Loading head forward: Hi Lo Eject head backward: Lo Hi Keeps the current mode (BRAKE): Hi Hi Stop (OFF): Lo Lo
52	MECH MOTOR	O	Control terminal for main motor. Outputs Hi only in PLAY/FF/REW. Outputs Low in other modes and during mode switching.
53	MECH ON	O	Control terminal to provide power supply for cassette mechanism in TAPE mode. Outputs " H" in TAPE mode.
54	OPEN BIAS	O	Outputs Hi in slave micro computer in motion. It supplies bias to OPEN/CLOSE detection switch.
55	SLOPE MOTOR	O	Electrical power supply switching output terminal for slope.
56 57	MOTOR+ MOTOR–	O O	Slope motor control output Open motion: Hi Lo Close motion: Lo Hi Brake: Hi Hi Stop: Lo Lo
58 59	$\overline{\text{OPEN}}$ $\overline{\text{CLOSE}}$	I I	Slope mode detection input Open: Lo Hi Close: Hi Lo In motion: Hi Hi Ineffective: Lo Lo
60	$\overline{\text{RESET}}$	I	Micro computer hardware stops when this terminal turns "L"
61	REMOCON	I	Remote control signal input (pulse)
62	$\overline{\text{B/U DET}}$	I	When this terminal is Low, micro computer detects B/U OFF, then stop oscillating by turning micro computer into STOP mode.
63	5V REM IN	I	When this terminal turns from Low to Hi, it detects ACC+5V is ON and turns from motion mode to STOP mode.
64	B.B. REQ	I	Insertion signal input terminal from B.B DSP
65	$\overline{\text{TAPE DOOR}}$	I	Inputs "L" when cassette tape is in the insertion slit
66	LCD DET IN	I	LCD driver. Input terminal for data transfer permission signal
67	GND	–	GND
68	VDD	–	Electrical power supply terminal
69 70	X2 X1	– I	Celullar lock connecting terminal for main system clock oscillation
71	IC	–	Connected to GND
72 73	XT2 XT1	– I	Not in use
74	AVDD	–	Applied voltage terminal for analog power supply for A/D converter
75	AVREF0	–	Standard applied voltage terminal for A/D converter
76 \ 80	N.C.	–	Not in use

■μPD178018GC-515-3B9 052-1314-00 Master Micro Computer

Outward Form

80 pins, plastic QFP

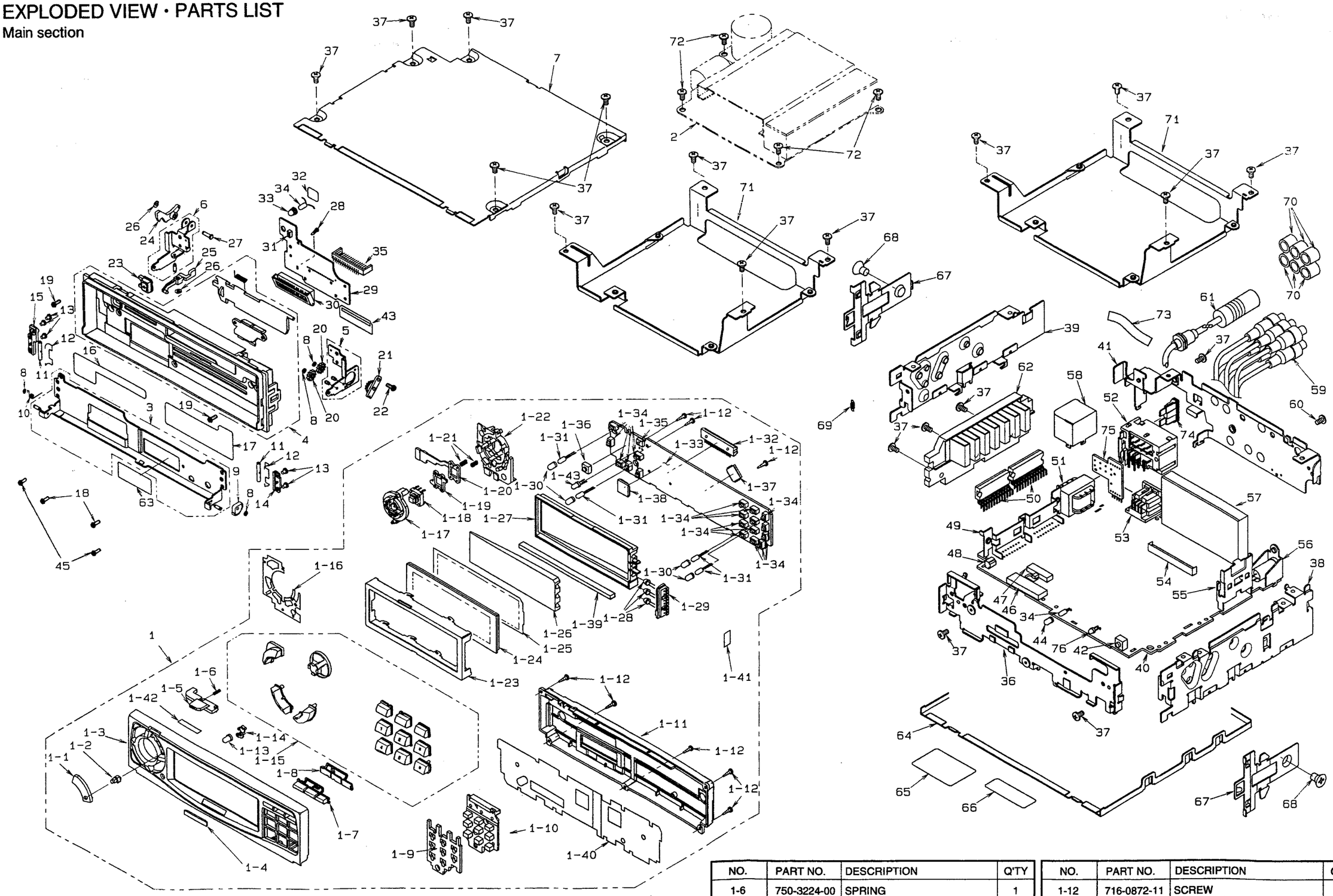
Terminal Description

No.	Symbol	I/O	Function
1	N.C.	I	Not in use
2	PHOTO TR DET	I	Light quantity detection input terminal for auto dimmer
3	KEY A/D	I	Input terminal for detecting key pushed out of OPEN/EJECT/FUNCTION
4	S-METER	I	Connects FM S meter and changes indication by the wave strength
5	RDS NOISE	I	Noise level detection terminal for FM RDS and SEEK
6	GND	I	Not in use
7 8 9 10 11	SUB SI SUB SO SUB SCK SUB REQ SUB BUSY	I O I/O O I	Serial communication line with slave micro computer
12 13 14	C-BUS SI C-BUS SO C-BUS SCK	I O O	C-BUS data communication line
15	PULSE DIMMER	O	Output terminal for pulse dimmer B/L LED ON signal
16	SD OPEN	O	Not in use
17	$\overline{\text{FM LOCAL}}$	O	Outputs Low when the first round starts in LOCAL SEEK and auto store. After receiving signal it returns to Hi output.
18	SD UP	O	Not in use
19	AM LOCAL	O	Outputs Hi when the first round starts in LOCAL SEEK and auto store. After receiving signal it returns to Hi output.
20	REM OUT SAV	O	Not in use
21	GND PORT	–	GND
22	VDD PORT	–	Power supply terminal
23	SOFT MUTE	O	Output terminal for switching an FM SOFT MUTE constant
24	$\overline{\text{SYS MUTE}}$	O	Output terminal for system mute signal
25	IF REQ	O	FM diversity output terminal. Outputs Hi in RADIO mode, FM, diver ON; outputs Low in diver OFF
26	RDS MUTE	O	RDS output terminal for noise reduction during follow-up motion
27	RDS DISCHG	O	RDS output terminal for discharging the voltage detected by RDS NOISE (5 pin)
28	AM IFC	I	AM IF count signal input terminal
29	FM IFC	I	FM IF count signal input terminal
30	VDD PLL	–	PLL power supply terminal
31 32	VCO H VCO L	I	Not in use
33	GND	–	GND
34 35	EO 0 EO 1	O	Not in use
36	IC	–	GND
37	AM SD	I	Detection terminal for AM SD. Judges SD ON by Hi
38	FM SD	I	Detection terminal for FM SD. Judges SD ON by Hi
39	$\overline{\text{FM ST}}$	I	Detecting terminal for FM stereo indicator
40	RDS DATA	I	Inputs data from RDS decoder
41	$\overline{\text{ILLUMI DET}}$	I	Illumination signal detection terminal
42	+B REM	O	Outputs Hi by power ON, supplying +B power
43 44	EVOL CLK EVOL DATA	O O	Serial data communication line to electronic volume IC
45	RDS +B REM	O	Spare terminal for RDS decoder power ON

No.	Symbol	I/O	Function
46	$\overline{\text{FM ON}}$	O	Output terminal for FM ON signal
47	$\overline{\text{AM ON}}$	O	Output terminal for AM ON signal
48	$\overline{\text{5V REM}}$	O	Outputs signal for 5V power ON around micro computer
49	$\overline{\text{C-BUS SRQ}}$	I	Request signal input terminal reading status from slave microcomputer. When this terminal turns Low it detects the status reading requested
50	EJECT LAMP	O	Eject key illumination output terminal
51	H/L DIMMER	O	Not in use
52	GND	I	GND
53 54 55 56	PLL DI PLL SCK PLL DO PLL CE	I O O O	PLL data communication terminal with PLL IC
57 \ 59	GND	I	Not in use
60	BLINKING LED	O	LED flashing output signal
61	KEY ILL	O	Outputs signal for DCP key illumination lighting
62	LCD DET OUT	I	LCD display ON/OFF control port. Connected to slave micro computer
63 \ 66	GND	I	GND
67	RDS CLK	I	Clock signal input from RDS decoder
68	$\overline{\text{B/U DET}}$	I	When this terminal turns Low, micro computer detects the B/U OFF and turns micro computer to STOP mode, stopping oscillation
69	ACC DET	I	ON/OFF detection terminal for ACC power supply
70	DCP DET	I	DCP removal/installation detection terminal Hi when DCP removed; Low when DCP installed
71	$\overline{\text{KEY INT}}$	I	Key insertion input terminal Low when EJECT key or FUNC(POWER) key pushed When this terminal turns Low, key A/D terminal detects the key pushed
72	GND	–	GND
73	PHONE INT	I	Input terminal for phone interrupt/cellular
74	REG CPU	–	Regulator terminal for CPU power supply. Connected to pass con against noise
75	GND	–	GND
76 77	X2 X1	– I	Connecting terminal for oscillating crystal for main system clock
78	REG OSC	–	Power supply regulator terminal for oscillator. Connected to pass con against noise
79	VDD	–	Power supply terminal
80	$\overline{\text{RESET}}$	I	Micro computer will stop by turning this terminal to "Low"

■EXPLODED VIEW・PARTS LIST

Main section



NO.	PART NO.	DESCRIPTION	Q'TY
1	940-1820A	DCP ASS'Y(ARX7370R)	1
	940-1795A	DCP ASS'Y(ARX7370RW)	1
1-1	335-5255-00	IR FILTER	1
1-2	335-5256-00	INDICATOR LENS	1

NO.	PART NO.	DESCRIPTION	Q'TY
1-3	370-5631-00	ESCUTCHEON(ARX7370R)	1
	370-5631-02	ESCUTCHEON(ARX7370RW)	1
1-4	378-0134-00	BADGE(Clarion)	1
1-5	382-4385-00	BUTTON(OPEN)	1

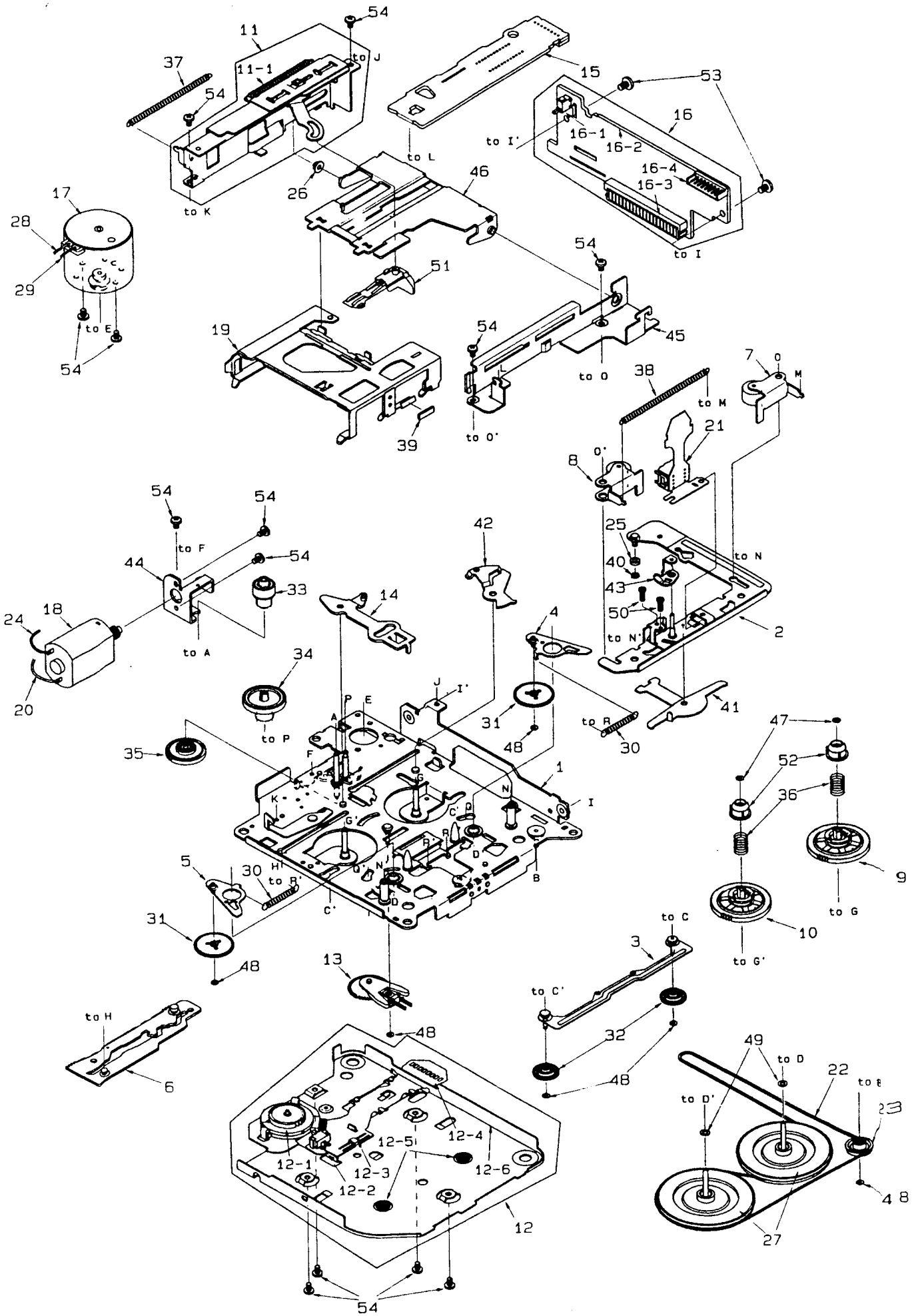
NO.	PART NO.	DESCRIPTION	Q'TY
1-6	750-3224-00	SPRING	1
1-7	382-4384-01	BUTTON(PS/AS,AF,PTY)	1
1-8	335-5258-00	BUTTON HOLDER	1
1-9	345-7863-00	SPONGE(R)	1
1-10	335-5259-00	ILLUMI PLATE	1
1-11	335-5261-00	REAR COVER	1

NO.	PART NO.	DESCRIPTION	Q'TY
1-12	716-0872-11	SCREW	8
1-13	382-4386-00	BUTTON(TITLE)	1
1-14	335-5257-00	BUTTON HOLDER	1
1-15	947-0425-00	BUTTON ASS'Y	1
1-16	347-5432-00	FILM	1
1-17	335-5275-00	JOG HOLDER	1

NO.	PART NO.	DESCRIPTION	Q'TY
1-18	013-9901-00	JOG SWITCH	1
1-19	335-5276-00	SPACER	1
1-20	039-0857-00	JOG SWITCH PWB	1
1-21	750-3248-00	SPRING	2
1-22	335-5277-00	ILLUMI PLATE	1
1-23	331-1977-00	LCD COVER	1
1-24	379-1079-41	LCD	1
1-25	347-5408-00	CCS FILM	1
1-26	335-5262-00	LCD ILLUMI	1
1-27	335-5260-00	LCD HOLDER	1
1-28	001-7030-00	LED	3
1-29	335-5263-00	LED HOLDER	1
1-30	345-4441-37	LAMP CAP	4
1-31	017-0444-00	PILOT LAMP	4
1-32	076-0535-00	PLUG(15P)	1
1-33	039-0860-00	SWITCH PWB	1
1-34	013-6302-01	SWITCH	18
1-35	060-4008-00	IR-RECEIVER	1
1-36	013-6006-00	SWITCH	1
1-37	051-6013-00	IC(LC75854W)	1
1-38	051-6022-00	IC(LC75824W)	1
1-39	345-7864-00	RUBBER CONNECTOR	1
1-40	347-5419-00	FILM	1
1-41	347-5429-00	FILM	1
1-42	347-5444-00	SHADE	1
1-43	060-0150-00	PHOTO TR	1
2	930-0738-83	TAPE MECHANISM	1
3	946-0060-00	DCP HOLDER ASS'Y	1
4	940-7780-60	INNER ESCUTCHEON ASS'Y	1
5	946-0058-00	GEAR HOLDER ASS'Y	1
6	946-0059-00	LEVER HOLDER ASS7Y	1
7	303-0457-02	UPPER COVER	1
8	746-0761-00	WASHER	4
9	613-0642-00	FUN GEAR	1
10	750-3226-00	SPRING	1
11	335-5314-00	ROLLER	2
12	750-3227-00	SPRING	2
13	738-1722-17	PRECISION SCREW	5
14	335-5268-00	SPRING HOLDER(R)	1
15	335-5272-00	SPRING HOLDER(L)	1
16	290-6598-00	LABEL	1
17	290-6577-00	LABEL(CAUTION)	1
18	716-1524-00	SCREW	2
19	716-1556-00	SCREW	2
20	613-0643-00	GEAR	2
21	613-0644-00	GEAR DAMPER	1
22	716-1569-00	SCREW	1
23	382-4387-00	BUTTON(EJECT)	1
24	335-5273-00	HOOK	1
25	335-5265-00	LEVER	1
26	743-1500-10	E-RING	2

NO.	PART NO.	DESCRIPTION	Q'TY
27	341-1635-00	SHAFT	1
28	716-0872-00	PAD SCREW	1
29	039-0832-00	DCP SUB PWB	1
30	074-1145-00	OUTLET SOCKET(15P)	1
31	013-3853-00	SWITCH(EJECT)	1
32	353-0359-00	SHADE	1
33	345-7148-13	LAMP CAP	1
34	017-0345-09	PILOT LAMP	2
35	076-0448-14	PLUG(14P)	1
36	309-0679-00	FRONT PLATE	1
37	731-3006-80	TAPTIGHT	15
38	305-0247-01	SIDE COVER(R)	1
39	305-0242-01	SIDE COVER(L)	1
40	039-0886-00	MAIN PWB	1
41	307-0579-00	REAR COVER	1
42	013-3932-00	SWITCH(RESET)	1
43	347-5431-00	SPACER	1
44	345-4441-50	LAMP CAP	1
45	714-2605-17	MACHINE SCREW	2
46	074-1012-14	OUTLET SOCKET(14P)	1
47	013-5102-01	SWITCH(OUT-IN)	1
48	013-3988-00	SWITCH(DETECTOR)	1
49	331-1766-00	IC HOLDER	1
50	051-2009-00	IC(POWER)	2
51	009-9006-80	CHOKE COIL	1
52	074-1115-00	OUTLET SOCKET(ISO)	1
53	074-1126-10	OUTLET SOCKET(13P)	1
54	076-0433-20	PLUG(20P)	1
55	313-1675-00	HEAT SINK	1
56	092-9000-00	ANT RECEPTACLE	1
57	880-2080A	TUNER PACK	1
58	331-1987-00	SHIELD CASE	1
59	855-5400-00	RCA PIN CORD	1
60	714-3006-81	MACHINE SCREW1	
61	855-8000-01	MINI-DIN CORD	1
62	313-1683-00	HEAT SINK	1
63	291-0078-00	STICKER(SECURITY)	1
64	304-0440-00	LOWER COVER	1
65	286-8664-00	SETPLATE(ARX7370R)	1
	286-8775-00	SETPLATE(ARX7370RW)	1
66	290-6573-00	LABEL(OUT-IN)	1
67	750-3137-00	SPRING	2
68	714-5008-41	MACHINE SCREW	2
69	750-3225-00	SPRING	1
70	345-3799-00	CAP	6
71	331-1990-00	MECHA BRACKET	1
72	714-2605-81	MACHINE SCREW	4
73	347-5423-00	PROTECTION FILM	1
74	060-0057-56	AUTO FUSE(10A)	1
75	039-0887-00	ISO CONNECTOR PWB	1
76	001-0659-00	DIODE	1

Tape mechanism section : 930-0738-83



NO.	PART NO.	DESCRIPTION	Q'TY
1	960-4405-20	DECK PLATE ASS'Y	1
2	960-4404-20	HEAD PLATE ASS'Y	1
3	960-4262-03	FF/REW-P-ASS'Y	1
4	960-4263-03	IDOLER-P-ASS'Y F	1
5	960-4264-03	IDOLER-P-ASS'Y R	1
6	960-4266-20	MODE PLATE ASS'Y	1
7	960-4269-05	ROLLER ASS'Y F	1
8	960-4270-05	ROLLER ASS'Y R	1
9	960-4348-02	REEL ASS'Y F	1
10	960-4349-02	REEL ASS'Y R	1
11	960-4389-03	EJECT SUB ASS'Y	1
11-1	750-3020-01	SW-PLATE SPRING	1
12	960-4338-07	BOTTOM SUB ASS'Y	1
12-1	013-3951-11	SWITCH	1
12-2	013-3953-01	SWITCH	1
12-3	051-1776-00	IC	1
12-4	099-9926-01	FLEXIBLE PWB	1
12-5	746-0767-00	WASHER	2
12-6	960-4295-02	BOTTOM PLATE ASS'Y	1
13	960-4282-06	DETECT SUB ASS'Y	1
14	960-4301-02	PLAY LINK ASS'Y	1
15	039-0053-00	SIDE PWB	1
16	990-0709-01	REAR PWB ASS'Y	1
16-1	013-3906-00	SWITCH	1
16-2	039-0368-00	REAR PWB	1
16-3	074-0978-20	OUTLET SOCKET	1
16-4	076-0353-08	PLUG	1
17	SMA-153-100	MAIN MOTOR ASS'Y	1
18	SMA-131-100	POWER MOTOR ASS'Y	1
19	960-4406-02	PACK GUIDE ASS'Y	1
20	816-2349-00	VINYL COAT WIRE(WHT)	1
21	011-0307-28	HEAD	1
22	602-0118-00	BELT	1

NO.	PART NO.	DESCRIPTION	Q'TY
23	604-0046-00	TENSION PULLEY	1
24	816-2304-00	VINYL COAT WIRE(BLU)	1
25	610-0342-01	HEAD-P-ROLLER	1
26	610-0343-00	GUIDE-A-ROLLER	1
27	611-0091-03	FLYWHEEL	2
28	802-4909-60	VINYL COAT WIRE(RED)	1
29	800-4909-60	VINYL COAT WIRE(BLK)	1
30	750-3148-00	IDOLER-P-SPRING	2
31	613-0285-02	IDOLER GEAR	2
32	613-0286-02	FF/REW GEAR	2
33	613-0288-01	HELICAL GEAR	1
34	613-0289-01	GEAR A	1
35	613-0337-00	POWER GEAR	1
36	750-2949-00	SLIDE SPRING	2
37	750-2947-04	EJECT-P-SPRING	1
38	750-2946-02	PINCH SPRING	1
39	746-0883-00	CLEANING PAD	1
40	746-0762-00	WASHER	1
41	630-2718-00	CHANGE LINK	1
42	630-2598-05	EJECT LINK	1
43	630-2600-01	ADJUST LINK	1
44	630-2601-02	MOTOR PLATE	1
45	630-2626-04	PWB FRAME	1
46	630-2642-01	GUIDE ARM	1
47	746-0761-00	WASHER(ϕ 1.6)	2
48	746-0724-00	WASHER(ϕ 1.1)	6
49	746-0624-00	WASHER(ϕ 2.1)	2
50	716-0833-10	AZIMUTH SCREW	2
51	631-1992-02	PACK STOPPER	1
52	631-1993-01	SLIDE BUSH	2
53	716-0761-01	PWB SCREW(M2.6×4)	2
54	716-0484-00	SCREW(M2×2.5)	13

■ELECTRICAL PARTS LIST

Note)Several different parts of the same reference number are alternative parts. One of those parts is used in the set.

Switch PWB section

REF No.	PART No.	DESCRIPTION
C 701	178-4732-78	0.047 μF
C 702	178-4732-78	0.047 μF
C 703	178-4732-78	0.047 μF
C 704	176-1011-00	100pF CH
C 705	178-4732-78	0.047 μF
C 706	178-4732-78	0.047 μF
C 707	178-4732-78	0.047 μF
C 708	178-4732-78	0.047 μF
C 709	178-8212-78	820pF
C 710	042-0403-01	16V10 μF TAN
C 711	178-1042-78	0.1 μF
C 717	183-1063-32	16V10 μF
D 702	001-7030-00	NSPB310A
D 703	001-7030-00	NSPB310A
D 704	001-7030-00	NSPB310A
D 705	001-0516-00	MA111
D 706	001-0584-23	MA8075
D 707	001-0584-23	MA8075
D 708	001-0584-23	MA8075
D 709	001-0584-23	MA8075
D 710	001-0584-23	MA8075
D 711	001-0584-23	MA8075
D 712	001-0584-23	MA8075
D 713	001-0584-23	MA8075
D 714	001-0584-23	MA8075
D 715	001-0423-22	MA4075
D 716	001-0516-00	MA111
D 717	001-0584-23	MA8075

REF No.	PART No.	DESCRIPTION
D 718	001-0584-23	MA8075
D 719	001-0584-23	MA8075
D 720	001-0584-23	MA8075
D 721	001-0584-23	MA8075
D 722	001-0584-23	MA8075
D 723	001-0584-23	MA8075
D 724	001-0584-23	MA8075
D 725	001-0584-23	MA8075
D 726	001-0584-23	MA8075
D 727	001-0516-00	MA111
IC 701	051-6013-00	LC75854W
IC 702	051-6022-00	LC75824W
IR 701	060-4008-00	
PL 701	017-0444-00	14V 50mA
PL 702	017-0444-00	14V 50mA
PL 703	017-0444-00	14V 50mA
PL 704	017-0444-00	14V 50mA
Q 701	060-0150-00	PN268-R
R 701	117-4341-10	1/10W 430kΩ
R 702	117-1031-10	1/10W 10kΩ
R 703	117-1031-10	1/10W 10kΩ
R 704	117-8231-10	1/10W 82kΩ
R 705	117-1011-10	1/10W 100Ω
R 706	032-0092-80	1/10W 330Ω
R 707	032-0092-80	1/10W 330Ω
R 708	032-0092-80	1/10W 330Ω
R 713	117-1241-10	1/10W 120kΩ
R 714	117-3921-10	1/10W 3.9kΩ

REF No.	PART No.	DESCRIPTION
R 715	117-1031-10	1/10W 10kΩ
R 716	117-2241-10	1/10W 220kΩ
R 724	032-0092-80	1/10W 330Ω
R 725	032-0092-80	1/10W 330Ω
R 726	032-0092-80	1/10W 330Ω
R 727	117-1021-10	1/10W 1kΩ
R 728	117-1021-10	1/10W 1kΩ
R 729	117-1021-10	1/10W 1kΩ
S 702	013-6302-01	
S 703	013-6302-01	
S 704	013-6302-01	
S 705	013-6302-01	
S 706	013-6302-01	
S 707	013-6302-01	
S 708	013-6302-01	
S 709	013-6302-01	
S 710	013-6302-01	
S 711	013-6302-01	
S 712	013-6302-01	
S 713	013-6302-01	
S 714	013-6302-01	
S 715	013-6302-01	
S 716	013-6006-00	
S 721	013-6302-01	
S 722	013-6302-01	
S 723	013-6302-01	
S 726	013-6302-01	

Main PWB section

REF No.	PART No.	DESCRIPTION
C 1	176-1801-00	18pF CH
C 2	178-1032-78	0.01 μF
C 3	176-2211-00	220pF CH
C 5	183-1053-61	50V1 μF
C 6	178-6822-78	6800pF
C 7	178-1042-78	0.1 μF
C 8	178-1022-78	1000pF
C 9	183-4763-31	16V47 μF
C 10	178-1032-78	0.01 μF
C 12	178-1222-78	1200pF
C 13	178-8222-78	8200pF
C 17	178-2232-78	0.022 μF
C 18	178-2232-78	0.022 μF
C 19	178-4732-78	0.047 μF
C 20	178-1522-78	1500pF
C 21	176-1501-00	15pF CH
C 22	176-1801-00	18pF CH
C 23	178-1042-78	0.1 μF
C 24	183-1053-61	50V1 μF
C 25	176-1011-00	100pF CH
C 26	176-1011-00	100pF CH
C 27	176-1011-00	100pF CH
C 28	176-1011-00	100pF CH
C 29	183-1063-31	16V10 μF
C 30	183-4763-31	16V47 μF
C 101	183-2253-62	50V2.2 μF
C 102	183-2253-62	50V2.2 μF
C 103	183-2253-62	50V2.2 μF
C 104	183-2253-62	50V2.2 μF
C 105	178-2232-78	0.022 μF
C 201	183-4763-31	16V47 μF
C 202	172-4731-11	0.047 μF
C 203	183-1063-31	16V10 μF
C 204	042-0447-00	16V2200 μF
C 205	172-1041-11	0.1 μF
C 206	178-4732-78	0.047 μF
C 207	183-1063-31	16V10 μF
C 208	183-1063-51	35V10 μF
C 210	184-1073-32	16V100 μF
C 253	183-1073-21	10V100 μF
C 254	183-1063-31	16V10 μF
C 409	183-4753-51	35V4.7 μF
C 410	183-4753-51	35V4.7 μF
C 411	183-4753-51	35V4.7 μF
C 412	173-2221-11	2200pF

REF No.	PART No.	DESCRIPTION
C 413	173-2221-11	2200pF
C 414	173-2221-11	2200pF
C 415	173-2221-11	2200pF
C 416	042-0537-00	50V0.56 μF
C 417	042-0537-00	50V0.56 μF
C 418	183-3343-61	50V0.33 μF
C 419	183-3343-61	50V0.33 μF
C 420	183-1063-31	16V10 μF
C 450	183-2263-11	6.3V22 μF
C 451	183-2263-11	6.3V22 μF
C 454	172-3331-11	0.033 μF
C 455	172-3331-11	0.033 μF
C 456	172-3331-11	0.033 μF
C 457	172-3331-11	0.033 μF
C 458	183-2263-11	6.3V22 μF
C 459	183-2263-11	6.3V22 μF
C 460	183-1063-31	16V10 μF
C 461	183-1063-31	16V10 μF
C 462	183-1063-31	16V10 μF
C 463	183-1063-31	16V10 μF
C 464	178-4732-78	0.047 μF
C 465	183-1063-31	16V10 μF
C 466	183-1063-31	16V10 μF
C 467	183-1063-31	16V10 μF
C 468	183-1063-31	16V10 μF
C 469	183-1063-31	16V10 μF
C 470	183-1063-31	16V10 μF
C 471	183-1063-31	16V10 μF
C 472	183-1063-31	16V10 μF
C 474	178-4732-78	0.047 μF
C 475	178-1032-78	0.01 μF
C 501	183-1063-31	16V10 μF
C 503	183-2243-61	50V0.22 μF
C 504	183-2253-62	50V2.2 μF
C 505	176-2701-00	27pF CH
C 506	176-1811-00	180pF CH
C 507	183-4753-51	35V4.7 μF
C 508	178-6832-78	0.068 μF
C 509	183-4753-51	35V4.7 μF
C 510	183-2263-11	6.3V22 μF
C 511	173-4721-11	4700pF
C 512	172-5631-11	0.056 μF
C 513	173-4721-11	4700pF
C 514	183-1063-31	16V10 μF
C 515	183-1063-31	16V10 μF

REF No.	PART No.	DESCRIPTION
C 517	183-2243-61	50V0.22 μF
C 518	183-2253-62	50V2.2 μF
C 519	176-2701-00	27pF CH
C 520	176-1811-00	180pF CH
C 521	183-4753-51	35V4.7 μF
C 522	178-6832-78	0.068 μF
C 523	183-4753-51	35V4.7 μF
C 524	183-2263-11	6.3V22 μF
C 525	173-4721-11	4700pF
C 526	172-5631-11	0.056 μF
C 527	173-4721-11	4700pF
C 528	183-1063-31	16V10 μF
C 529	183-4743-61	50V0.47 μF
C 530	183-4753-51	35V4.7 μF
C 533	176-1011-00	100pF CH
C 607	178-4732-78	0.047 μF
C 608	183-4763-11	6.3V47 μF
C 609	042-0559-00	5.5V0.1 μF
C 610	178-4732-78	0.047 μF
C 613	178-4732-78	0.047 μF
C 614	178-4732-78	0.047 μF
C 615	042-0458-06	10V 22 μF
C 616	176-1011-00	100pF CH
C 617	178-1032-78	0.01 μF
C 618	178-1022-78	1000pF
C 651	178-4732-78	0.047 μF
C 652	178-2232-78	0.022 μF
C 653	176-1011-00	100pF CH
C 654	178-1022-78	1000pF
C 801	178-3312-78	330pF
C 802	183-2253-62	50V2.2 μF
C 803	178-5612-78	560pF
C 804	183-4763-11	6.3V47 μF
C 805	178-1042-78	0.1 μF
C 806	176-4701-00	47pF CH
C 807	176-8201-00	82pF CH
C 810	178-3312-78	330pF
C 811	178-5612-78	560pF
C 812	178-5612-78	560pF
C 813	178-2232-78	0.022 μF
C 814	178-2232-78	0.022 μF
C 815	178-1032-78	0.01 μF
C 816	178-3312-78	330pF
C 818	178-1022-78	1000pF
C 903	183-4763-31	16V47 μF

REF No.	PART No.	DESCRIPTION
C 904	183-1063-51	35V10 μF
C 908	178-1042-78	0.1 μF
C 909	042-0458-06	10V 22 μF
C 910	178-4732-78	0.047 μF
C 916	184-1073-32	16V100 μF
C 917	178-1022-78	1000pF
C 918	176-1011-00	100pF CH
C 919	178-1022-78	1000pF
C 920	176-1011-00	100pF CH
C 921	178-1022-78	1000pF
D 101	001-0584-20	MA8056
D 208	001-0466-00	S5688B
D 209	001-0466-00	S5688B
D 212	001-0516-00	MA111
D 213	001-0516-00	MA111
D 214	001-0188-01	1S1885A
D 215	001-0589-00	1SS145
D 216	001-0330-00	1SS119
D 218	001-0330-00	1SS119
D 222	001-0377-11	MA4030M
D 252	001-0377-46	MA4091L
D 451	001-0516-00	MA111
D 452	001-0516-00	MA111
D 501	001-0516-00	MA111
D 502	001-0516-00	MA111
D 601	001-0516-00	MA111
D 602	001-0659-00	SLP-181B-51
D 651	001-0516-00	MA111
D 652	001-0516-00	MA111
D 653	001-0516-00	MA111
D 654	001-0330-00	1SS119
D 801	001-0541-00	MA157
D 901	001-0503-47	HZS9B3L
D 902	001-0466-00	S5688B
IC 1	051-6201-00	LC72146M
IC 101	051-2009-00	TDA8561Q
IC 102	051-2009-00	TDA8561Q
IC 201	051-3201-00	AN77L06
IC 401	051-5200-90	CXA1332M
IC 450	051-1811-00	BA3129F
IC 451	051-0350-55	NJM4558M
IC 452	051-0350-55	NJM4558M
IC 501	051-5008-00	M62419FP
IC 502	051-0350-55	NJM4558M
IC 601	052-1314-00	μPD178018GC-515-3B9
IC 651	051-0869-55	NJM2103M
IC 652	051-0160-06	SN74LS07NS
IC 652	051-7400-06	HD74LS07FP
IC 801	051-1819-00	SAA6579T
IC 802	051-0350-55	NJM4558M
IC 901	052-3330-00	μPD78058FGC-044-3B9
IC 902	051-1014-05	TA7291F
L 1	010-2003-04	
L 201	010-2198-56	2.2 μH
L 202	010-2330-24	22 μH
L 203	010-2330-24	22 μH
L 601	010-2330-12	2.2 μH
L 602	010-2330-36	220 μH
L 651	010-2285-56	
L 901	010-2330-12	2.2 μH
PL 201	017-0345-09	
Q 1	100-1298-00	2SA1298
Q 2	100-1162-00	2SA1162
Q 3	103-1306-00	2SD1306
Q 4	125-0002-03	RN2403
Q 4	125-0024-03	MUN2112
Q 7	108-0669-00	2SK669
Q 101	125-2004-06	RN1406
Q 101	125-2020-06	DTC143ZK
Q 201	101-1237-00	2SB1237
Q 202	100-1162-00	2SA1162
Q 209	102-2712-00	2SC2712
Q 210	125-2004-03	RN1403
Q 210	125-2031-03	MUN2212
Q 211	101-1143-00	2SB1143

REF No.	PART No.	DESCRIPTION
Q 213	101-1237-00	2SB1237
Q 214	102-2712-00	2SC2712
Q 215	125-2004-03	RN1403
Q 215	125-2031-03	MUN2212
Q 216	125-2004-03	RN1403
Q 216	125-2031-03	MUN2212
Q 217	100-1162-00	2SA1162
Q 218	102-2712-00	2SC2712
Q 222	102-2712-00	2SC2712
Q 223	101-1237-50	2SB1237QR
Q 224	125-2004-03	RN1403
Q 224	125-2031-03	MUN2212
Q 251	103-2118-00	2SD2118
Q 252	108-0241-50	2SK241Y.GR
Q 450	125-0002-02	RN2402
Q 450	125-0024-02	MUN2111
Q 451	125-0002-02	RN2402
Q 451	125-0024-02	MUN2111
Q 452	125-2030-00	RN1410
Q 453	125-2030-00	RN1410
Q 454	125-2030-00	RN1410
Q 455	125-2030-00	RN1410
Q 456	103-1306-00	2SD1306
Q 457	103-1306-00	2SD1306
Q 458	103-1306-00	2SD1306
Q 459	103-1306-00	2SD1306
Q 460	103-1306-00	2SD1306
Q 461	103-1306-00	2SD1306
Q 466	125-2004-06	RN1406
Q 466	125-2020-06	DTC143ZK
Q 467	100-1162-00	2SA1162
Q 468	125-2004-03	RN1403
Q 468	125-2031-03	MUN2212
Q 601	100-1162-00	2SA1162
Q 651	125-2004-03	RN1403
Q 651	125-2031-03	MUN2212
Q 652	125-2004-03	RN1403
Q 652	125-2031-03	MUN2212
Q 653	102-2712-00	2SC2712
Q 654	102-2712-00	2SC2712
Q 655	100-1162-00	2SA1162
Q 802	125-2004-03	RN1403
Q 802	125-2031-03	MUN2212
Q 901	103-1802-60	2SD1802FA-R.S.T
Q 902	125-0002-02	RN2402
Q 902	125-0024-02	MUN2111
Q 903	125-2004-02	RN1402
Q 903	125-2031-02	MUN2211
Q 904	100-1428-00	2SA1428
Q 905	125-2004-06	RN1406
Q 905	125-2020-06	DTC143ZK
R 1	117-8221-10	1/10W 8.2kΩ
R 2	111-3311-91	1/4WS 330Ω
R 3	117-1831-10	1/10W 18kΩ
R 4	117-1021-10	1/10W 1kΩ
R 5	117-1231-10	1/10W 12kΩ
R 7	117-1021-10	1/10W 1kΩ
R 8	117-2241-10	1/10W 220kΩ
R 9	117-1031-10	1/10W 10kΩ
R 10	117-1031-10	1/10W 10kΩ
R 11	117-1031-10	1/10W 10kΩ
R 12	117-1021-10	1/10W 1kΩ
R 13	117-1031-10	1/10W 10kΩ
R 14	117-1021-10	1/10W 1kΩ
R 15	117-3331-10	1/10W 33kΩ
R 16	117-1021-10	1/10W 1kΩ
R 17	117-1231-10	1/10W 12kΩ
R 18	117-2711-10	1/10W 270Ω
R 19	117-1021-10	1/10W 1kΩ
R 20	117-2221-10	1/10W 2.2kΩ
R 21	117-2231-10	1/10W 22kΩ
R 27	117-5631-10	1/10W 56kΩ
R 28	117-1011-10	1/10W 100Ω
R 29	117-1001-10	1/10W 10Ω
R 101	117-2231-10	1/10W 22kΩ
R 102	117-1021-10	1/10W 1kΩ
R 103	117-1021-10	1/10W 1kΩ

REF No.	PART No.	DESCRIPTION
R 104	117-1021-10	1/10W 1kΩ
R 105	117-1021-10	1/10W 1kΩ
R 201	117-1031-10	1/10W 10kΩ
R 202	111-1221-91	1/4WS 1.2kΩ
R 203	117-1031-10	1/10W 10kΩ
R 204	117-1221-10	1/10W 1.2kΩ
R 205	117-2221-10	1/10W 2.2kΩ
R 206	117-1031-10	1/10W 10kΩ
R 215	117-1801-10	1/10W 18Ω
R 218	117-1031-10	1/10W 10kΩ
R 219	111-1221-91	1/4WS 1.2kΩ
R 220	117-4721-10	1/10W 4.7kΩ
R 221	111-1591-91	1/4WS 1.5Ω
R 222	111-1591-91	1/4WS 1.5Ω
R 223	111-1591-91	1/4WS 1.5Ω
R 224	111-1591-91	1/4WS 1.5Ω
R 225	117-1031-10	1/10W 10kΩ
R 226	111-2221-91	1/4WS 2.2kΩ
R 227	117-1031-10	1/10W 10kΩ
R 228	117-1831-10	1/10W 18kΩ
R 229	117-4721-10	1/10W 4.7kΩ
R 230	117-2231-10	1/10W 22kΩ
R 233	117-1011-10	1/10W 100Ω
R 234	117-1011-10	1/10W 100Ω
R 235	117-1021-10	1/10W 1kΩ
R 236	117-2221-10	1/10W 2.2kΩ
R 237	117-1031-10	1/10W 10kΩ
R 238	111-1521-91	1/4WS 1.5kΩ
R 239	117-2231-10	1/10W 22kΩ
R 240	117-2231-10	1/10W 22kΩ
R 241	117-2241-10	1/10W 220kΩ
R 245	111-4700-91	1/4WS 47Ω
R 246	111-1221-91	1/4WS 1.2kΩ
R 247	117-2221-10	1/10W 2.2kΩ
R 404	117-1031-10	1/10W 10kΩ
R 405	117-1031-10	1/10W 10kΩ
R 406	117-1031-10	1/10W 10kΩ
R 407	117-2431-10	1/10W 24kΩ
R 408	117-5611-10	1/10W 560Ω
R 409	117-5611-10	1/10W 560Ω
R 410	117-2431-10	1/10W 24kΩ
R 411	117-1021-10	1/10W 1kΩ
R 412	117-2731-10	1/10W 27kΩ
R 432	117-1031-10	1/10W 10kΩ
R 433	111-8211-91	1/4WS 820Ω
R 435	117-1031-10	1/10W 10kΩ
R 436	117-3321-10	1/10W 3.3kΩ
R 437	117-1231-10	1/10W 12kΩ
R 438	117-1021-10	1/10W 1kΩ
R 440	117-3321-10	1/10W 3.3kΩ
R 441	117-3321-10	1/10W 3.3kΩ
R 442	117-6821-10	1/10W 6.8kΩ
R 443	117-2231-10	1/10W 22kΩ
R 445	117-3321-10	1/10W 3.3kΩ
R 446	117-3321-10	1/10W 3.3kΩ
R 447	117-6821-10	1/10W 6.8kΩ
R 448	117-2231-10	1/10W 22kΩ
R 450	117-6831-10	1/10W 68kΩ
R 451	117-6831-10	1/10W 68kΩ
R 452	117-6821-10	1/10W 6.8kΩ
R 453	117-6821-10	1/10W 6.8kΩ
R 454	117-6831-10	1/10W 68kΩ
R 455	117-6831-10	1/10W 68kΩ
R 456	117-6821-10	1/10W 6.8kΩ
R 457	117-6821-10	1/10W 6.8kΩ
R 458	117-4731-10	1/10W 47kΩ
R 459	117-4721-10	1/10W 4.7kΩ
R 460	117-3311-10	1/10W 33Ω
R 461	117-3311-10	1/10W 33Ω
R 462	117-2231-10	1/10W 22kΩ
R 463	117-2231-10	1/10W 22kΩ
R 464	117-3311-10	1/10W 33Ω
R 465	117-3311-10	1/10W 33Ω
R 466	117-2231-10	1/10W 22kΩ
R 467	117-2231-10	1/10W 22kΩ
R 468	117-3311-10	1/10W 33Ω
R 469	117-3311-10	1/10W 33Ω

REF No.	PART No.	DESCRIPTION
R 470	117-2231-10	1/10W 22kΩ
R 471	117-2231-10	1/10W 22kΩ
R 473	117-1021-10	1/10W 1kΩ
R 474	117-1021-10	1/10W 1kΩ
R 475	117-1021-10	1/10W 1kΩ
R 476	117-3311-10	1/10W 330Ω
R 477	117-2231-10	1/10W 22kΩ
R 478	032-0092-90	1/4W 10kΩ
R 479	032-0092-90	1/4W 10kΩ
R 480	032-0092-03	1/10W 15kΩ
R 481	032-0092-03	1/10W 15kΩ
R 482	117-3311-10	1/10W 330Ω
R 483	117-2231-10	1/10W 22kΩ
R 484	032-0092-90	1/4W 10kΩ
R 485	032-0092-90	1/4W 10kΩ
R 486	032-0092-03	1/10W 15kΩ
R 487	032-0092-03	1/10W 15kΩ
R 488	117-3311-10	1/10W 330Ω
R 489	117-2231-10	1/10W 22kΩ
R 490	032-0092-90	1/4W 10kΩ
R 491	032-0092-90	1/4W 10kΩ
R 492	032-0092-03	1/10W 15kΩ
R 493	032-0092-03	1/10W 15kΩ
R 494	117-3311-10	1/10W 330Ω
R 495	117-2231-10	1/10W 22kΩ
R 496	032-0092-90	1/4W 10kΩ
R 497	032-0092-90	1/4W 10kΩ
R 498	032-0092-03	1/10W 15kΩ
R 499	032-0092-03	1/10W 15kΩ
R 501	117-3331-10	1/10W 33kΩ
R 503	117-2731-10	1/10W 27kΩ
R 504	117-1031-10	1/10W 10kΩ
R 505	117-2231-10	1/10W 22kΩ
R 506	117-5131-10	1/10W 51kΩ
R 507	117-1241-10	1/10W 120kΩ
R 508	117-6821-10	1/10W 6.8kΩ
R 509	117-3331-10	1/10W 33kΩ
R 510	117-4721-10	1/10W 4.7kΩ
R 511	117-3331-10	1/10W 33kΩ
R 513	117-2731-10	1/10W 27kΩ
R 514	117-1031-10	1/10W 10kΩ
R 515	117-2231-10	1/10W 22kΩ
R 516	117-5131-10	1/10W 51kΩ
R 517	117-1241-10	1/10W 120kΩ
R 518	117-6821-10	1/10W 6.8kΩ
R 519	117-3331-10	1/10W 33kΩ
R 520	117-4721-10	1/10W 4.7kΩ
R 521	117-1041-10	1/10W 100kΩ
R 522	117-1241-10	1/10W 120kΩ
R 523	117-1021-10	1/10W 1kΩ

REF No.	PART No.	DESCRIPTION
R 524	117-1221-10	1/10W 1.2kΩ
R 525	117-4731-10	1/10W 47kΩ
R 526	117-4731-10	1/10W 47kΩ
R 601	117-1041-10	1/10W 100kΩ
R 602	117-1031-10	1/10W 10kΩ
R 603	117-4721-10	1/10W 4.7kΩ
R 604	117-1031-10	1/10W 10kΩ
R 605	117-4731-10	1/10W 47kΩ
R 606	117-4711-10	1/10W 470Ω
R 607	117-1021-10	1/10W 1kΩ
R 608	117-1031-10	1/10W 10kΩ
R 609	117-4731-10	1/10W 47kΩ
R 610	117-2231-10	1/10W 22kΩ
R 613	117-1041-10	1/10W 100kΩ
R 614	117-2221-10	1/10W 2.2kΩ
R 615	117-1021-10	1/10W 1kΩ
R 616	117-1021-10	1/10W 1kΩ
R 617	117-1021-10	1/10W 1kΩ
R 618	117-1011-10	1/10W 100Ω
R 619	117-1041-10	1/10W 100kΩ
R 620	117-1041-10	1/10W 100kΩ
R 621	117-1041-10	1/10W 100kΩ
R 622	117-1041-10	1/10W 100kΩ
R 623	117-1041-10	1/10W 100kΩ
R 624	117-1041-10	1/10W 100kΩ
R 625	117-1041-10	1/10W 100kΩ
R 626	117-1041-10	1/10W 100kΩ
R 627	117-1041-10	1/10W 100kΩ
R 651	117-2231-10	1/10W 22kΩ
R 652	117-4731-10	1/10W 47kΩ
R 653	117-4731-10	1/10W 47kΩ
R 654	117-1541-10	1/10W 150kΩ
R 655	117-4321-10	1/10W 4.3kΩ
R 656	117-8221-10	1/10W 8.2kΩ
R 657	032-0092-81	1/10W 180kΩ
R 659	117-1041-10	1/10W 100kΩ
R 660	117-4721-10	1/10W 4.7kΩ
R 661	117-4721-10	1/10W 4.7kΩ
R 662	117-2231-10	1/10W 22kΩ
R 663	117-2231-10	1/10W 22kΩ
R 664	117-4721-10	1/10W 4.7kΩ
R 665	117-1031-10	1/10W 10kΩ
R 666	117-1021-10	1/10W 1kΩ
R 667	117-1021-10	1/10W 1kΩ
R 668	117-4731-10	1/10W 47kΩ
R 669	117-1031-10	1/10W 10kΩ
R 670	117-2231-10	1/10W 22kΩ
R 671	117-5621-10	1/10W 5.6kΩ
R 672	117-1031-10	1/10W 10kΩ
R 673	117-1031-10	1/10W 10kΩ

REF No.	PART No.	DESCRIPTION
R 675	117-2231-10	1/10W 22kΩ
R 676	117-4731-10	1/10W 47kΩ
R 677	032-0092-28	1/10W 62kΩ
R 801	117-2221-10	1/10W 2.2kΩ
R 802	117-3331-10	1/10W 33kΩ
R 803	117-3321-10	1/10W 3.3kΩ
R 804	117-2231-10	1/10W 22kΩ
R 805	117-1031-10	1/10W 10kΩ
R 806	117-1231-10	1/10W 12kΩ
R 807	117-1041-10	1/10W 100kΩ
R 808	117-1031-10	1/10W 10kΩ
R 809	117-1031-10	1/10W 10kΩ
R 811	117-2211-10	1/10W 220Ω
R 901	117-1031-10	1/10W 10kΩ
R 902	117-1031-10	1/10W 10kΩ
R 903	117-1031-10	1/10W 10kΩ
R 904	117-1031-10	1/10W 10kΩ
R 905	117-1031-10	1/10W 10kΩ
R 906	117-2231-10	1/10W 22kΩ
R 907	117-1041-10	1/10W 100kΩ
R 908	117-1031-10	1/10W 10kΩ
R 909	111-2711-91	1/4WS 270Ω
R 910	117-1031-10	1/10W 10kΩ
R 911	111-1221-91	1/4WS 1.2kΩ
R 912	111-1221-91	1/4WS 1.2kΩ
R 915	117-1041-10	1/10W 100kΩ
R 917	117-1041-10	1/10W 100kΩ
R 920	117-1041-10	1/10W 100kΩ
R 921	117-1041-10	1/10W 100kΩ
R 922	117-1041-10	1/10W 100kΩ
R 923	117-1041-10	1/10W 100kΩ
R 924	117-1041-10	1/10W 100kΩ
R 925	117-1041-10	1/10W 100kΩ
R 926	117-1041-10	1/10W 100kΩ
R 927	117-1041-10	1/10W 100kΩ
R 928	117-1041-10	1/10W 100kΩ
R 929	117-1041-10	1/10W 100kΩ
R 930	117-1041-10	1/10W 100kΩ
S 201	013-3988-00	
S 450	013-5102-01	
S 601	013-3932-00	
SUP1	060-0122-10	DSP-201M-S00B
T 201	009-9006-80	
VR 401	012-5123-06	10kΩ
VR 402	012-5123-06	10kΩ
X 1	061-1066-00	7.2MHz
X 601	060-1023-00	CST4.5MGW
X 801	061-3013-00	4.33MHz
X 901	060-0319-00	4.915MHz

DCP sub PWB section

REF No.	PART No.	DESCRIPTION
PL 801	017-0345-09	

REF No.	PART No.	DESCRIPTION
S 801	013-3853-00	

Jog switch PWB section

REF No.	PART No.	DESCRIPTION
S 724	013-9901-00	

Tape mechanism section

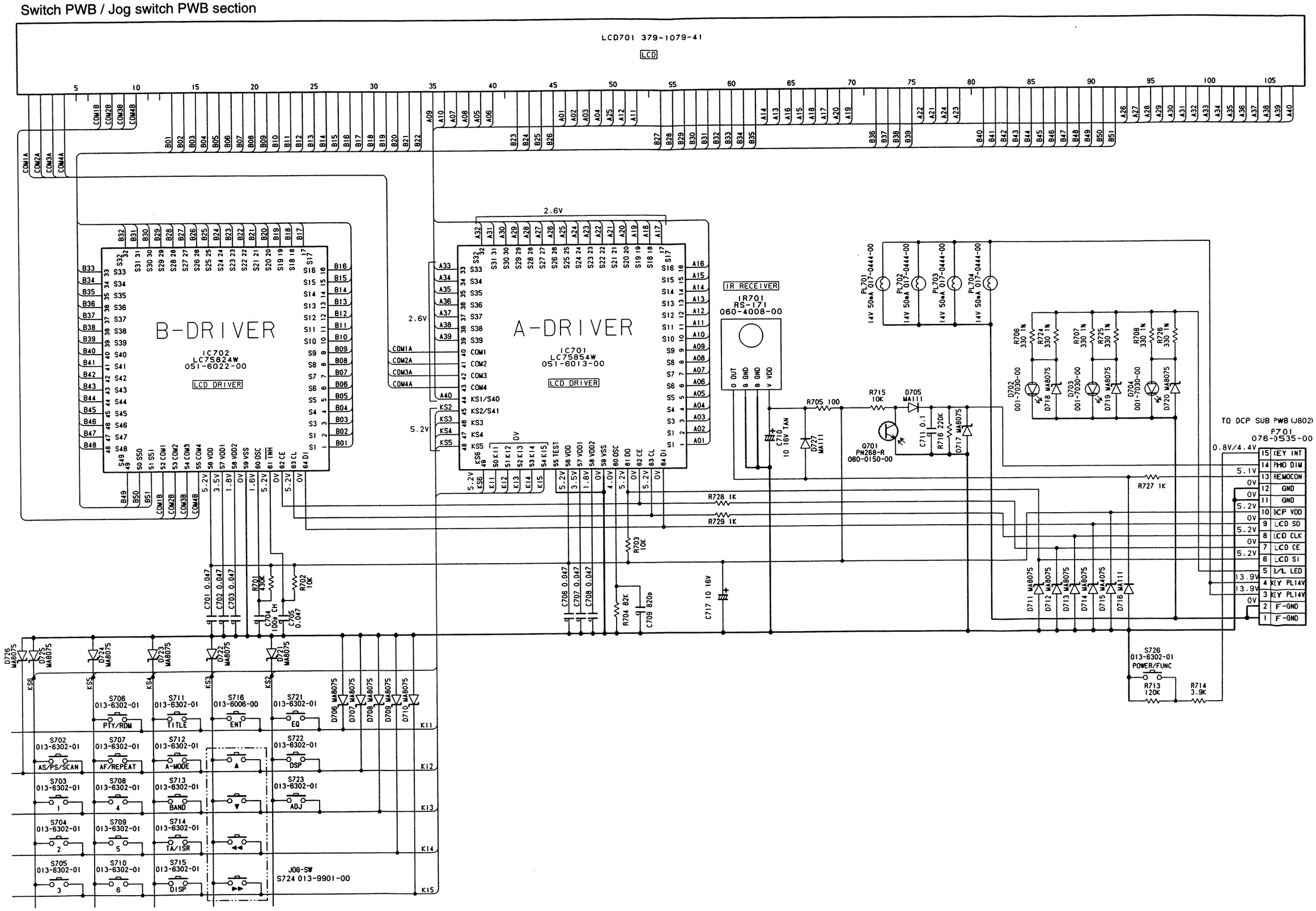
REF No.	PART No.	DESCRIPTION
C 1	175-3311-00	330pF CH
C 2	175-3311-00	330pF CH
C 3	175-3311-00	330pF CH
C 4	175-3311-00	330pF CH
C 5	183-4763-11	6.3V47 μF
C 6	042-0552-02	10V68 μF
C 7	042-0552-02	10V68 μF
C 8	173-1231-10	0.012 μF
C 9	173-1231-10	0.012 μF
C 10	183-4753-51	35V4.7 μF
C 11	183-1043-61	50V0.1 μF
C 12	175-5611-00	560pF CH
C 13	183-4743-61	50V0.47 μF

REF No.	PART No.	DESCRIPTION
C 14	183-2263-31	16V22 μF
C 15	183-4753-51	35V4.7 μF
C 16	183-4753-51	35V4.7 μF
IC 1	051-1546-10	BA3430S
IC 2	051-1776-00	NJL5801K
R 1	111-1241-91	1/4WS 120kΩ
R 2	111-1241-91	1/4WS 120kΩ
R 3	111-1241-91	1/4WS 120kΩ
R 4	111-1241-91	1/4WS 120kΩ
R 5	116-1011-10	1/8W 100Ω
R 6	116-1011-10	1/8W 100Ω
R 7	117-3341-10	1/10W 330kΩ
R 8	117-1131-10	1/10W 11kΩ

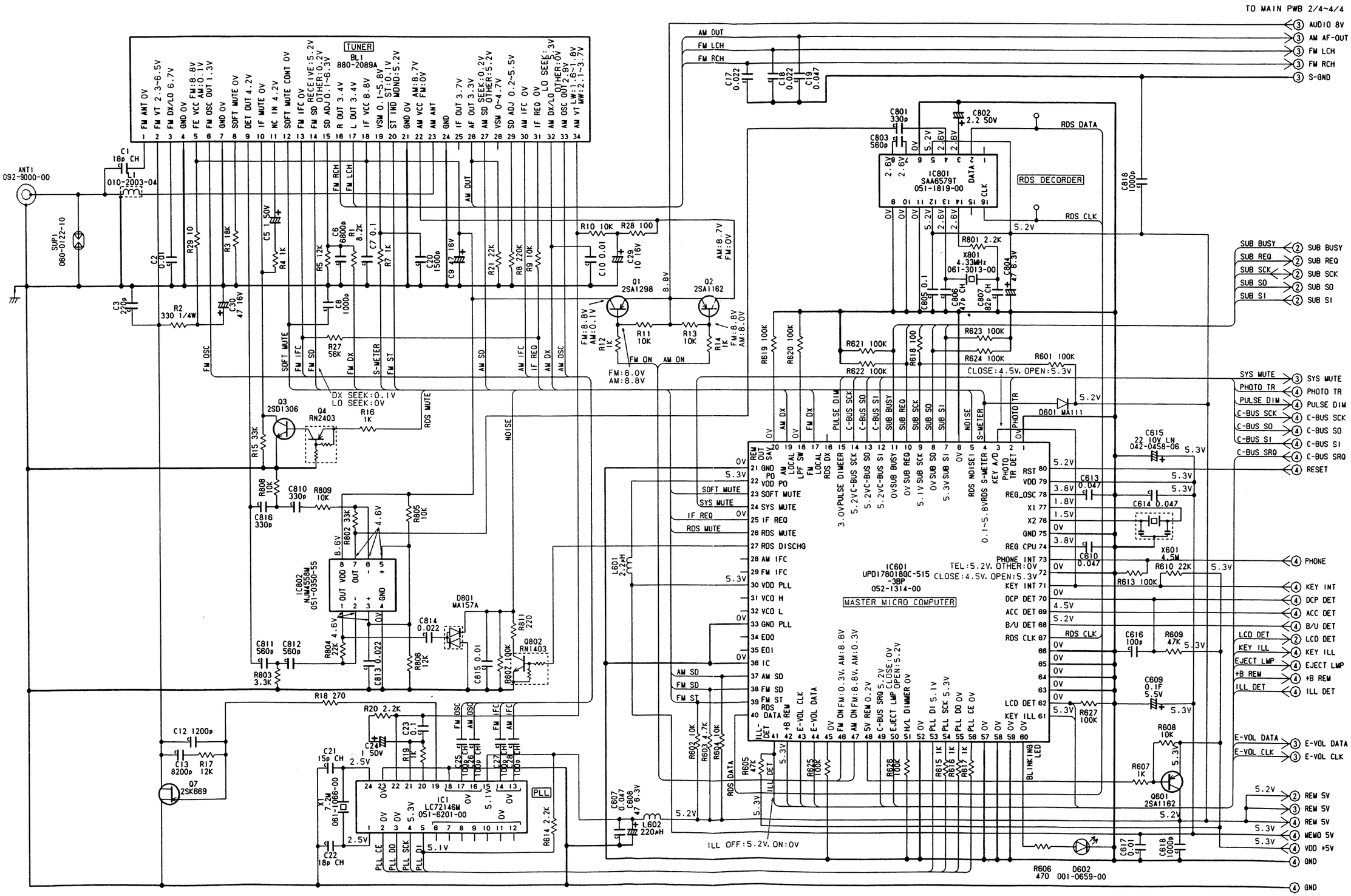
REF No.	PART No.	DESCRIPTION
R 9	117-1531-10	1/10W 15kΩ
R 10	117-1531-10	1/10W 15kΩ
R 11	117-1131-10	1/10W 11kΩ
R 12	117-3341-10	1/10W 330kΩ
R 13	117-1811-10	1/10W 180Ω
R 14	117-8211-10	1/10W 820Ω
R 15	116-2231-10	1/8W 22kΩ
R 16	117-1031-10	1/10W 10kΩ
R 17	117-1031-10	1/10W 10kΩ
R 18	111-5611-91	1/4WS 560Ω
SW 1	013-3906-00	3PPB51
SW 2	013-3953-01	
SW 3	013-3951-10	

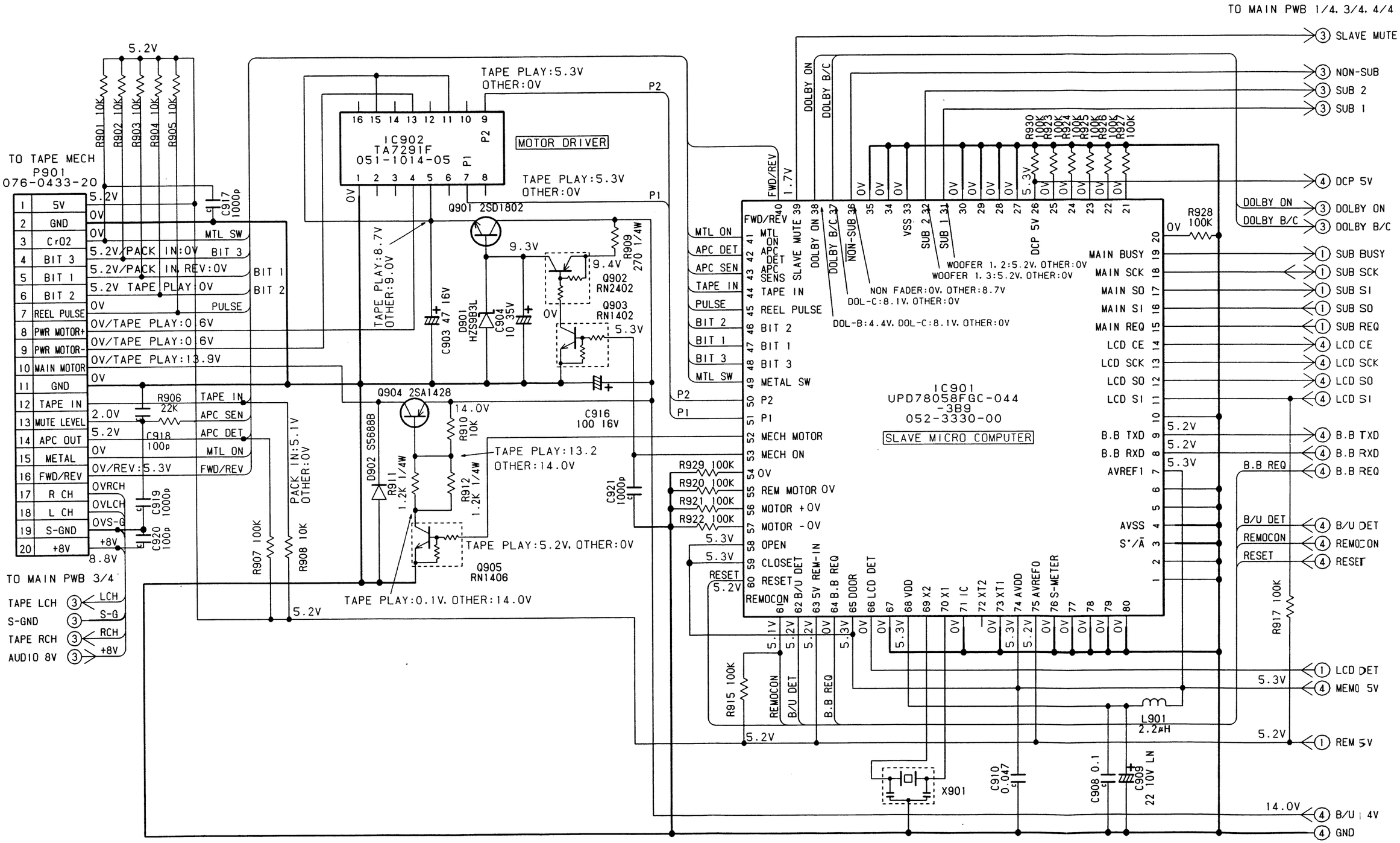
■CIRCUIT DIAGRAM

Switch PWB / Jog switch PWB section

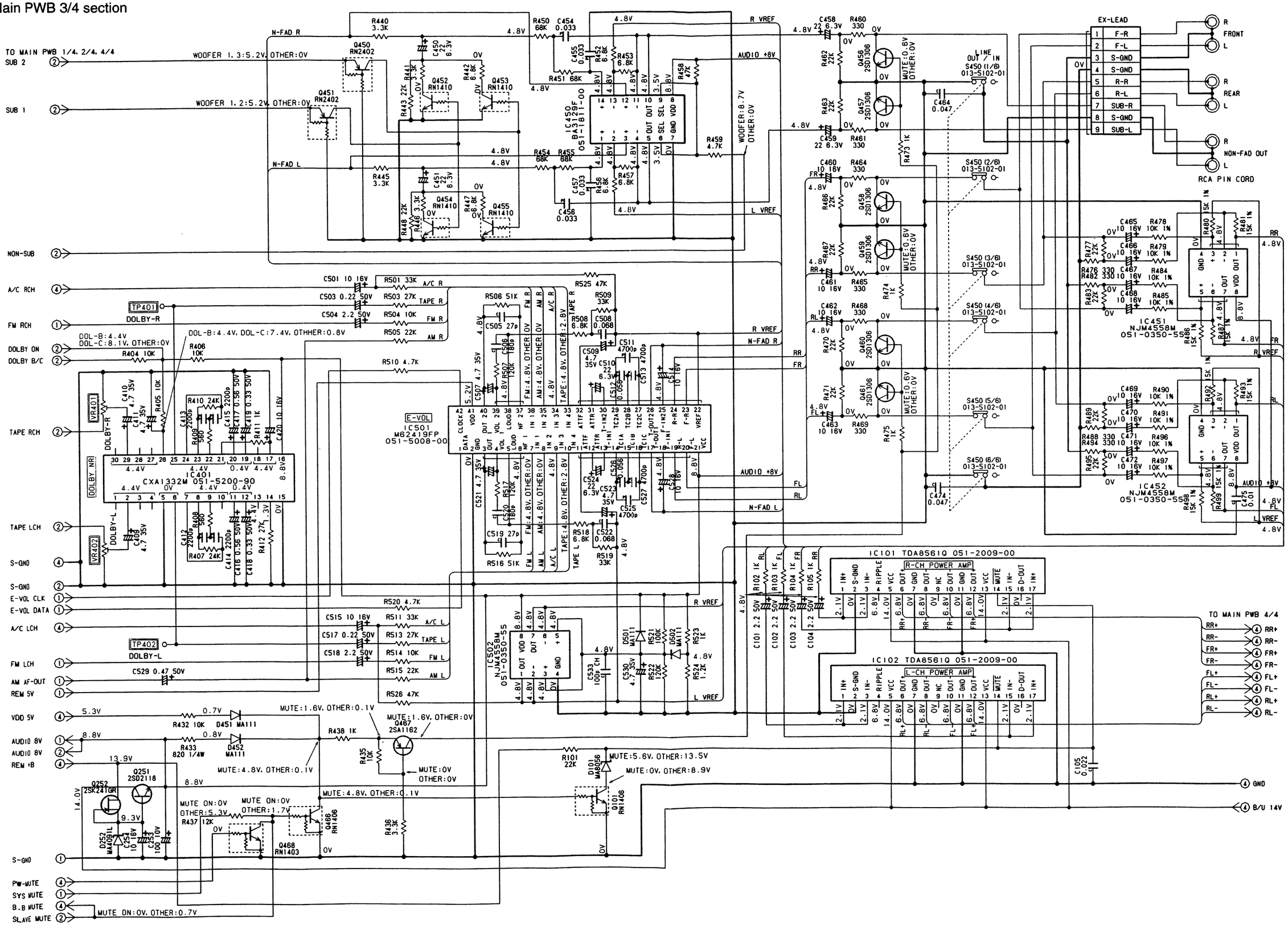


Main PWB 1/4 section

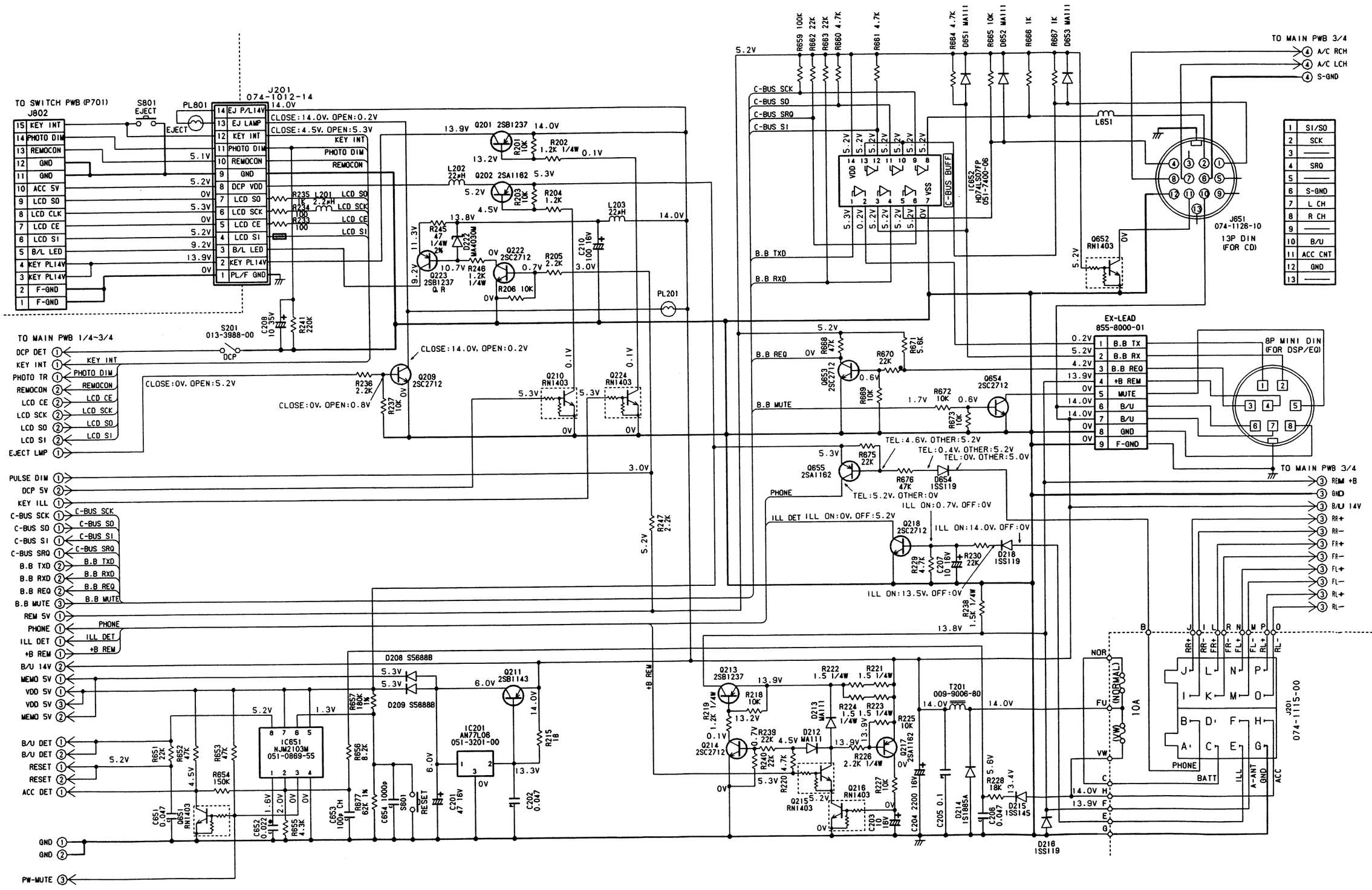



TO MAIN PWB 1/4, 3/4, 4/4
TO TAPE MECH
P901
076-0433-20
5.2V
R901 10K
R902 10K
R903 10K
R904 10K
R905 10K
C917 1000p
MTL SW
BIT 3
BIT 1
BIT 2
PULSE
5.2V/PACK IN:0V
5.2V/PACK IN, REV:0V
5.2V TAPE PLAY:0V
OV/TAPE PLAY:0.6V
OV/TAPE PLAY:0.6V
OV/TAPE PLAY:13.9V
R906 22K
C918 100p
C919 1000p
C920 100p
TAPE IN
APC SEN
APC DET
MTL ON
FWD/REV
OV/REV:5.3V
8.8V
TO MAIN PWB 3/4
TAPE LCH
S-GND
TAPE RCH
AUDIO 8V
LCH
S-G
RCH
+8V
IC902
TA7291F
051-1014-05
MOTOR DRIVER
TAPE PLAY:5.3V
OTHER:0V
P2
P1
Q901 2SD1802
TAPE PLAY:8.7V
OTHER:9.0V
9.3V
9.4V
R909 270 1/4W
Q902
RN2402
Q903
RN1402
5.3V
C903 47 16V
D901
HZS9B3L
C904 10 35V
C916 100 16V
Q904 2SA1428
14.0V
R910 10K
D902 S5688B
R911 1.2K 1/4W
R912 1.2K 1/4W
TAPE PLAY:13.2
OTHER:14.0V
C921 1000p
TAPE PLAY:5.2V, OTHER:0V
Q905
RN1406
TAPE PLAY:0.1V, OTHER:14.0V
PACK IN:5.1V
OTHER:0V
R907 100K
R908 10K
DOLBY ON
DOLBY B/C
NON-SUB
SUB 2
SUB 1
SLAVE MUTE
R930 100K
R923 100K
R924 100K
R925 100K
R926 100K
R927 100K
R928 100K
WOOFER 1, 2:5.2V, OTHER:0V
WOOFER 1, 3:5.2V, OTHER:0V
NON FADER:0V, OTHER:8.7V
DOL-C:8.1V, OTHER:0V
DOL-B:4.4V, DOL-C:8.1V, OTHER:0V
IC901
UPD78058FGC-044
-3B9
052-3330-00
SLAVE MICRO COMPUTER
MTL ON
APC DET
APC SEN
TAPE IN
PULSE
BIT 2
BIT 1
BIT 3
MTL SW
METAL SW
P2
P1
MECH MOTOR
MECH ON
REM MOTOR 0V
MOTOR +0V
MOTOR -0V
OPEN
CLOSE
RESET
REMOCON
R929 100K
R920 100K
R921 100K
R922 100K
R915 100K
R917 100K
MAIN BUSY
MAIN SCK
MAIN SO
MAIN SI
MAIN REQ
LCD CE
LCD SCK
LCD SO
LCD SI
B.B TXD
B.B RXD
B.B REQ
B/U DET
REMOCON
RESET
LCD DET
MEMO 5V
REM 5V
B/U +4V
GND
L901 2.2µH
X901
C910 0.047
C908 0.1
C909 22 10V LN

Main PWB 3/4 section



Main PWB 4/4 / DCP sub PWB /
ISO connector PWB section

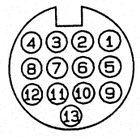


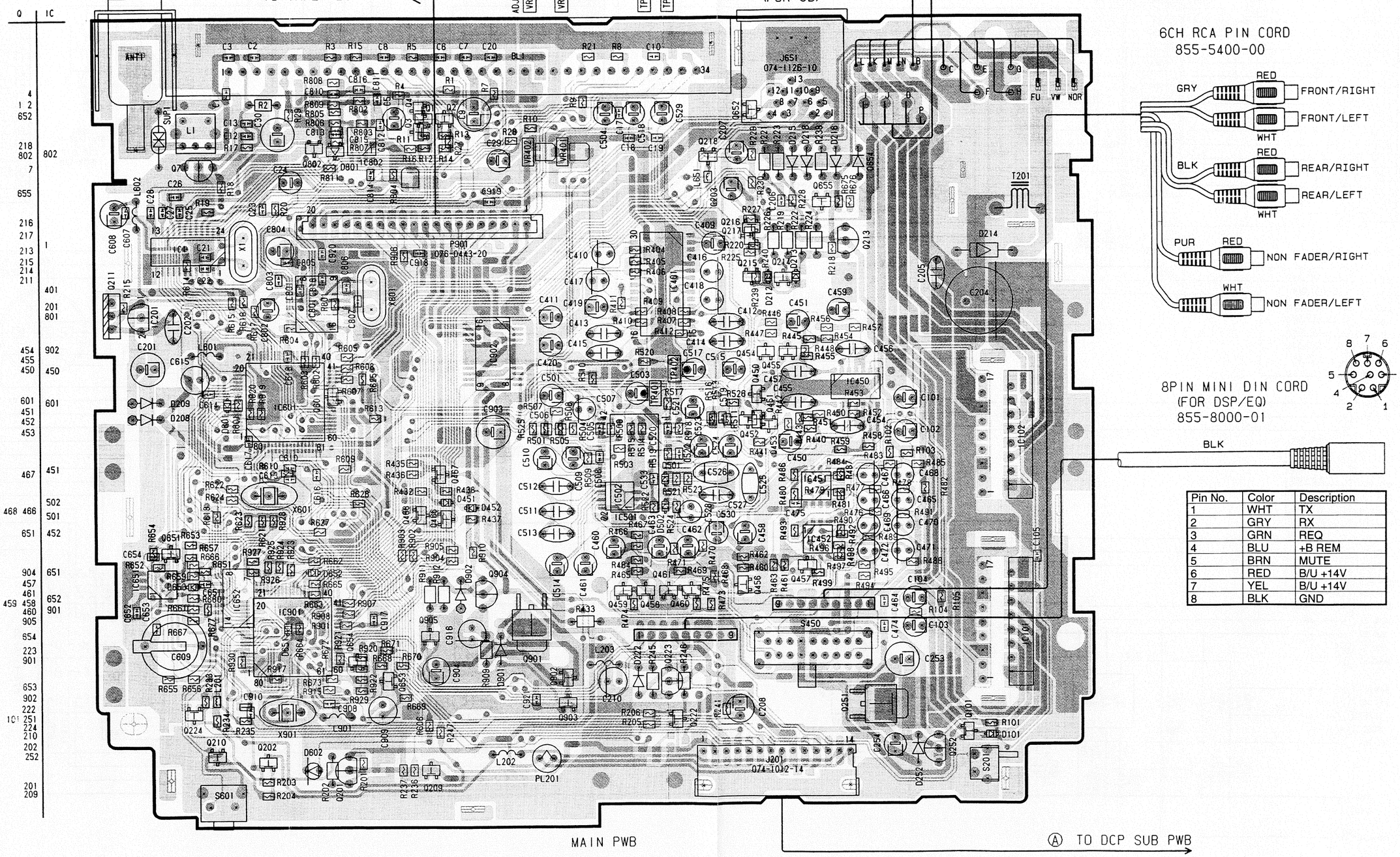
■PRINTED WIRING BOARD

Main PWB section

No.	Description
1	SO/SI
2	SCK
3	NC
4	SRQ
5	NC
6	S-GND
7	L-CH IN

No.	Description
8	R-CH IN
9	NC
10	+B
11	ACC CONTROL
12	GND
13	NC



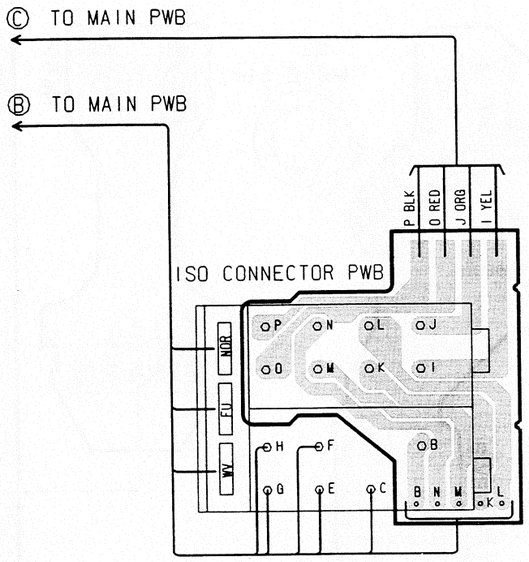


6CH RCA PIN CORD
855-5400-00

8PIN MINI DIN CORD
(FOR DSP/EQ)
855-8000-01

Pin No.	Color	Description
1	WHT	TX
2	GRY	RX
3	GRN	REQ
4	BLU	+B REM
5	BRN	MUTE
6	RED	B/U +14V
7	YEL	B/U +14V
8	BLK	GND

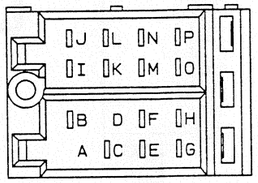
Switch PWB / Jog switch PWB /
DCP sub PWB / ISO connector PWB section



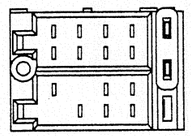
No.	Description
A	NC
B	PHONE MUTE
C	PERMANENT
D	NC
E	ILLUMI
F	AUTO ANT
G	GND
H	ACC

No.	Description
I	REAR SP R-CH(−)
J	REAR SP R-CH(+)
K	FRONT SP R-CH(−)
L	FRONT SP R-CH(+)
M	FRONT SP L-CH(−)
N	FRONT SP L-CH(+)
O	REAR SP L-CH(−)
P	REAR SP L-CH(+)

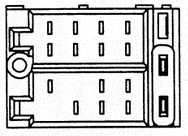
ISO CONNECTOR



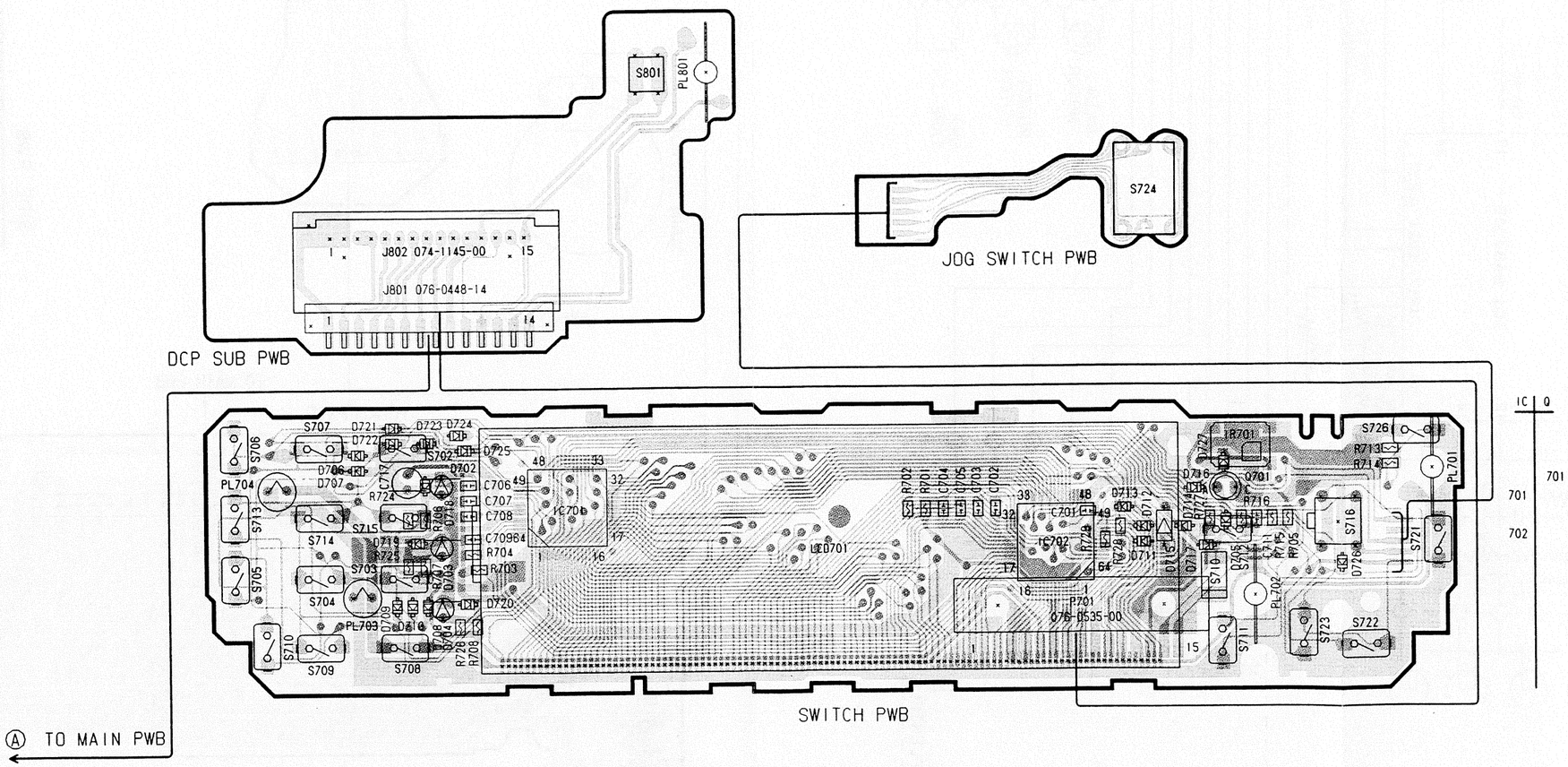
The possition of fuse



(For other vehicles)

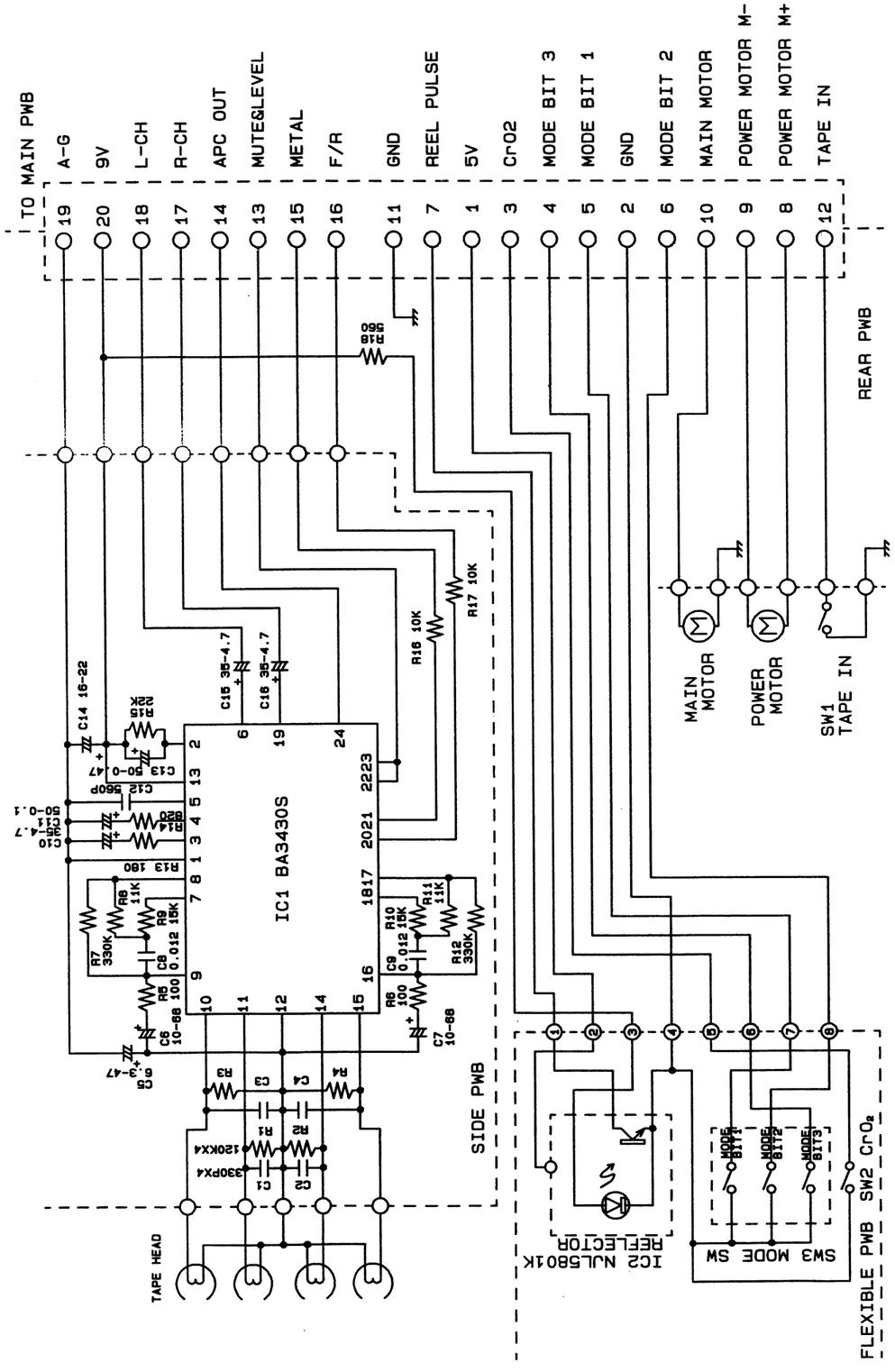


(For VW and Audi)



■ CIRCUIT DIAGRAM

Tape mechanism section



■ PRINTED WIRING BOARD

Tape mechanism section